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## **TARDAEWETHER Kellen \* ODOE**

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**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:53 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.38.19.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter signed by me and 54 other residents of La Grande expressing our concerns regarding the B2H Project and we request that EFSC deny the Site Certificate.

I have also sent a bound copy of this material by the US Postal Service.

Sincerely,

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850



August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the usage of the "Local Streets" <sup>1</sup> specifically the Modelaire-Hawthorne Loop) <sup>2</sup>, hereafter referred to as the "loop", of La Grande to access the site entrance. This residential "loop" was constructed without sidewalks for a new development around the early 1960s.

According to OAR 345-022-0110, Public Services (pg. 5. April 2017) "The applicant...must address all permanent and temporary impacts of the facility on housing, traffic, safety, police and fire protection, health care and schools." <sup>3</sup>

My impression from reviewing the application Page 17 <sup>4</sup> is that the applicant has not fully examined the final portion of the intended route nor does it fully recognize or address the need for traffic mitigation. This "loop" is the only access to/from thirty-six houses to the rest of the city. The area to the north of the "loop" is occupied by the Grande Ronde Hospital and Medical Clinic. Two blocks to the east is located the local high school and a grade school. <sup>2</sup>

In June of 2016, the Grande Ronde Hospital petitioned the City to have a conditional use for a parking lot expansion project next to Hawthorne. The Conditional Use Permit was approved subject to the Condition of Approval that "No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to residential standards and is not designed to support commercial traffic." <sup>5</sup>

The La Grande Director of Public Works, Kyle Carpenter, provided information regarding the widths for the streets in question. The two streets range from 33 feet to 37 feet in width with no sidewalks. I personally measured the area where the unpaved stem of Hawthorne leaves the "loop" to go up the hill. At the junction it measures 32 feet curb cut to curb cut and narrows to 18-21 feet in width as it goes around the corner up the hill. 6 The Public Works Director also provided pictures of the mapping system showing the existing utilities located in the "loop". 7-8. It should also be noted that from the entrance to the "loop" at Sunset Drive to the entrance of the site the road has a 16% grade.

Attachment U2 9 from the application shows an "Aerial Lift Crane to be Used During Construction" and the Transportation and Traffic Plan on page 19 10 lists a number of other vehicles anticipated to be used. Article 6.6 — Public Street Standards for the City of La Grande Section 6.6.002 states that "Collector Streets are designed to withstand normal trucks of an HS20 loading. Larger trucks are to utilize Arterial Streets where at all possible." 11 The majority of vehicles listed on page 19 exceed that limit and would be using a Local Street in addition to Arterial and Collector Streets. According to the Public Works Director the two streets in the "loop" were designed as Local Streets for residential use, able to accept the pressures of HS20 for the purpose of an occasional need such as a weekly garbage truck or an emergency vehicle but for no more than 5% of the time. The paving construction of these over 50 year old streets in the "loop" was not designed for repetitive use by vehicles heavier than a normal car. These streets in the "loop" have not been repaved, only patched when necessary, since they were first constructed.

The application does not address the "loop" specifically, but 3.1.2 (pg. 19) 10 and Table 6 (pg.17) 12 of the Transportation and Traffic Plan indicate there would be numerous vehicles using this route. Not knowing exactly just which vehicles would be on the "loop" daily but making a conservative estimate of 50 round trips (100 single) it would be a constant parade with one truck every 7.2 minutes. This is unacceptable for numerous reasons including constant excessive noise.

Not only would weight of the vehicles be a problem but the narrowness of the "loop" streets and the ninety degree blind curves that would have to be executed would be either impossible or extremely dangerous considering the turning radius for many of these large vehicles. The



already dangerous situation for a number of driveways that exit onto these "loop" streets at blind curves would be exacerbated. 13-14

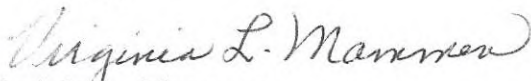
When considering only the traffic and safety issues listed above, the use of the "loop" as a part of the route for Idaho Power seems to be not only dangerous for the residents but unconscionable and irresponsible for Idaho Power to use such streets that are currently primarily for the neighborhood for walking (children to school, all ages for physical training), driving, or biking. I fear there are standards that are either not being considered or they are intentionally being ignored. There should be some common sense, courtesy and respect for the impact this project would impose on any neighborhood.

Finally, La Grande Ordinance Number 3077, which adopted Oregon State Traffic Laws by reference, states in Section 17 page 8 "It shall be unlawful for any person, firm or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes." Neither Modelaire/Hawthorne Loop nor Sunset Drive are posted as truck routes. 15-16

A site review and traffic plan must be completed prior to the cite certificate being issued and not 90 days prior to construction as stated.

For the above reasons I oppose the usage of the proposed route for the construction of the B2H transmission line.

Sincerely,

  
Virginia L. Mammen  
405 Balsa  
La Grande, Oregon. 97850

gmammen@eoni.com

**TABLE 1  
 STREET STANDARDS**

Functional Classification	ADT Volume	Speed (mph)	# of Travel Lanes	Travel Lane Width	Turn Lane or Median Width	Bike Lanes	Min. Bike Lane Width	On-Street parking
Downtown Arterial	10,000	20	2-3	11'	11'			both sides
Arterial	10,000	40-55	2-5	12'	4-14'	optional <sup>4</sup>	5'	none
Major Collector	2,000 - 10,000	25-45	2-3	11'	12'	required	5'	one or both sides
Minor Collector	1,000 - 2,000	25-35	2	11'	none	Optional <sup>5</sup>	5'	one or both sides
Local Street	0 - 1,000	15-25	2	10'	none	none	none	one or both sides

Functional Classification	Sidewalks	Min. Sidewalk Width	Planting Strip Width <sup>1</sup>	Total Paved Width <sup>2</sup>	Total ROW Width <sup>3</sup>	Private Access Spacing
Downtown Arterial	required	12'	3'6" <sup>6</sup>	49'	80'	200'
Arterial	required	5'	8'	36'-72'	80'-102'	200' - 400'
Major Collector	required	5'	8'	52'-60'	62'-90'	150' - 300'
Minor Collector	required	5'	8'	30'-48'	60'-78'	75' - 150'
Local Street	required	5'	8'	28'-36'	40'-66'	Each Lot

<sup>1</sup>A portion of the required planting strip width may be used instead as additional sidewalk width or reduced right of way, as appropriate.

<sup>2</sup>The minimum of the paved width was calculated with the following assumptions:

Arterials: Two (2) travel lanes, four foot (4') median divider, no center turn lane, no bike lanes.

Major Collectors: Two (2) travel lanes, two (2) bike lanes, no center turn lane, parking on one (1) side.

Minor Collectors: Two (2) travel lanes, parking on one (1) side of street, no bike lanes.

Local Streets: Two (2) travel lanes, parking on one (1) side of street.

The maximum paved width for each street was calculated assuming the inclusion of all required and optional facilities. Minimum paved widths for each street are as required in Section 6.2.005 of this Code.

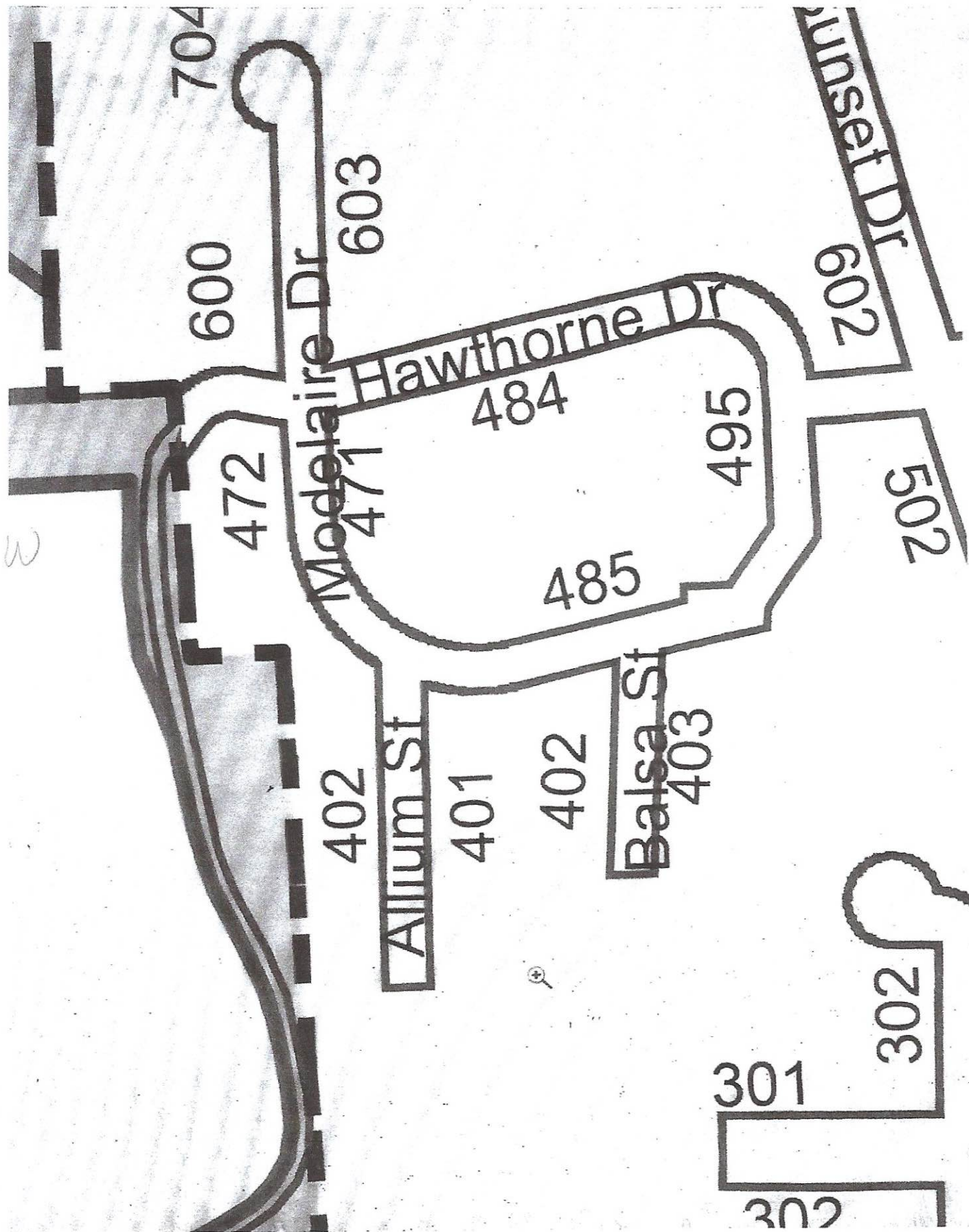
<sup>3</sup>These right-of-way width ranges are for new streets.

<sup>4</sup>Bike lanes should be provided on Arterials unless more desirable parallel facilities are designated and designed to accommodate bicycles.

<sup>5</sup> Bike lanes should be provided on Minor Collectors where traffic volumes or other factors warrant. Otherwise, Minor Collectors should be designed and designated as shared roadway facilities with wide outside travel lanes of 14' on important bike routes.



N



5



## Public Services

### OAR 345-022-0110

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## Waste Minimization

### OAR 345-022-0120

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## Need for a Facility

### OAR 345-023-0005

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## Specific Standards for Wind Facilities

### OAR 345-024-0010 and 345-024-0015

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## Specific Standards for Transmission Lines

### OAR 345-024-0090

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





Idaho Power Responses to Comments and Requests for Additional Information on the B2H APASC  
from the City of La Grande  
Compiled by ODOE. RAI's from the City of La Grande and Responses from IPC

		proposed helipad is a necessary supporting facility.	
U	U- Public Services include utilities such as road systems, water, sanitation services, power, and other amenities necessary for the construction.	Ordinance #2912, Series 1997 gives the City jurisdiction and control on all City street rights-of-way and Ordinance #3077, Series 2009, establishes the process and requirements for permits and licenses for uses of the streets that are not normal uses and may result in damages.	<p>The project construction has two major road systems through La Grande that are proposed for this project – Morgan Lake Road via Gekeler Lane, 'C' Avenue, Walnut Street, and on up Morgan Lake Road. Roads along these routes are used by the ambulance service for accessing the hospital, the public transit system on its normal daily route, citizens to access locations within and outside this area and also for the school bus system for transporting kids to the La Grande Middle School, La Grande High School and Central Elementary School. In addition to the vehicular modes of travel, those routes are heavily used by bicyclists and pedestrians. The other route that would be utilized is the same route with the exception of turning onto Sunset Drive and up Hawthorne Street to a private gravel road that heads up the area above Deal Canyon. Two other routes that are not addressed but that would be obvious access routes for construction would be South 12th Street and South 20th Street. As a general rule, City streets are built with ninety degree angles, which may restrict some</p> <p>To address the City's concerns regarding traffic and road use within the city's limits, Idaho Power has added the following proposed conditions to Exhibit K:</p> <p><u>Land Use Condition 9: Prior to construction in Union County, the site certificate holder shall complete the following to address traffic impacts in the county:</u></p> <p><u>a. The site certificate holder shall finalize, and submit to the department for its approval, a final county-specific transportation and traffic plan. The protective measures described in the draft Transportation and Traffic Plan in ASC Exhibit U, Attachment U-2, shall be included and implemented as part of the final county-specific plan, unless otherwise approved by the department;</u></p> <p><u>b. The site certificate holder shall work with the Union County Road Department and the City of La Grande Public Works Department to identify concerns related to Project construction traffic; and</u></p> <p><u>c. The site certificate holder shall develop traffic control measures to mitigate the effects of Project construction traffic;</u></p> <p><u>Land Use Condition 26: During construction in Union County, the site certificate holder shall conduct all work in compliance with the Union County-specific</u></p>

#### IV. CONCLUSIONS

Based on the Findings of Fact above, the Planning Commission concludes that the application meets the requirements established in LDC Articles 8.5 and other applicable codes and Ordinances.

#### V. ORDER AND CONDITIONS OF APPROVAL

Based on the conclusions above, the Planning Commission approves the Conditional Use Permit as requested, subject to the following Conditions of Approval:

1. No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to a residential standards and is not designed to support commercial traffic.
2. Any existing driveway curb cuts along Hawthorn Drive bordering GRH's property, that are not used for residential purposes, shall be removed and replaced with City standard improvements that exists adjacent to such areas.
3. There is a storm sewer line extending through the project area that shall to be protected. Any improvements that may affect the storm sewer line shall be reviewed and approved by the Public Works Director.

#### VI. STANDARD CONDITIONS OF APPROVAL FOR LAND USE APPLICATIONS

1. **Revisions to a Valid Conditional Use Permit:** Any variations, alterations, or changes in a valid Conditional Use Permit requested by the deed holder shall be considered in accordance with the procedures of the Land Development Code as though a new Conditional Use Permit were being applied for.
2. **Public Works Standards:** Where a development involves work within the public right-of-way, a Right-of-Way Permit shall be obtained from the Public Works Department in advance of commencing with any work in the right-of-way. All improvements within the public right-of-way shall be in conformance with the most recent adopted City of La Grande *"Engineering Standard Drawings and Specifications for Construction Manual."*
3. **Building Permits:** The City of La Grande Building Department shall be contacted early in the process and in advance of development to coordinate and obtain required building, plumbing, electrical and/or mechanical permits. All required permits shall be acquired in advance of construction.

#### VI. OTHER PERMITS AND RESTRICTIONS

The applicant and property owner is herein advised that the use of the property involved in this application may require additional permits from the City of La Grande or other local, State or Federal Agencies.

The City of La Grande land use review, approval process and any decision issued does not take the place of, or relieve the applicant of responsibility for acquiring such other permits, or satisfy any restrictions or conditions thereon. The land use decision herein does not remove, alter, or impair in any way the covenants or restrictions imposed on this property by deed or other instrument.

The land use approvals granted by this decision shall be effective only when the rights granted herein have been exercised and commenced within one (1) year of the effective date of the decision. In case such right has not been exercised and commenced or an extension obtained, the approvals granted by this decision shall become null and void. A written request for an extension of time shall be filed with the Planning Department at least thirty (30) days prior to the expiration date of the approval.





Virginia Mammen &lt;4gmammen@gmail.com&gt;

**Modelaire Roadway Specifications**

3 messages

**Kyle Carpenter** <KCarpenter@cityoflagrande.org>  
To: "gmammen@eoni.com" <gmammen@eoni.com>

Fri, Jul 12, 2019 at 1:51 PM

I have attached a couple pictures of our mapping system that will give you a sense of where existing utilities are in Modelaire and Hawthorne. As for the widths of the roadways, I took measurements in multiple places, and found the following:

- Modelaire Drive (F Avenue) between Sunset Blvd and Hawthorne Drive is approximately 33 feet wide with a grade of about 5 Percent.
- Hawthorne Drive is approximately 32 feet wide at the bottom near the intersection of Modelaire/F Avenue and widens to about 34 feet where it intersects Modelaire at the top of the hill. The grade heading up hill is approximately 15.5 Percent.
- Modelaire Drive is generally 36 feet wide with some minor variability generally less than a foot (35' to 37'). On the southernmost segment of the roadway where the majority of the elevation gain is observed the grade is approximately 16 Percent.

Let me know if there are any other specifications of these roadways that you are interested in that I have missed. Have a great weekend and thanks for the treats, the guys were very appreciative.

*Kyle Carpenter, PE*

**Public Works Director**

**City of La Grande**

**Public Works**

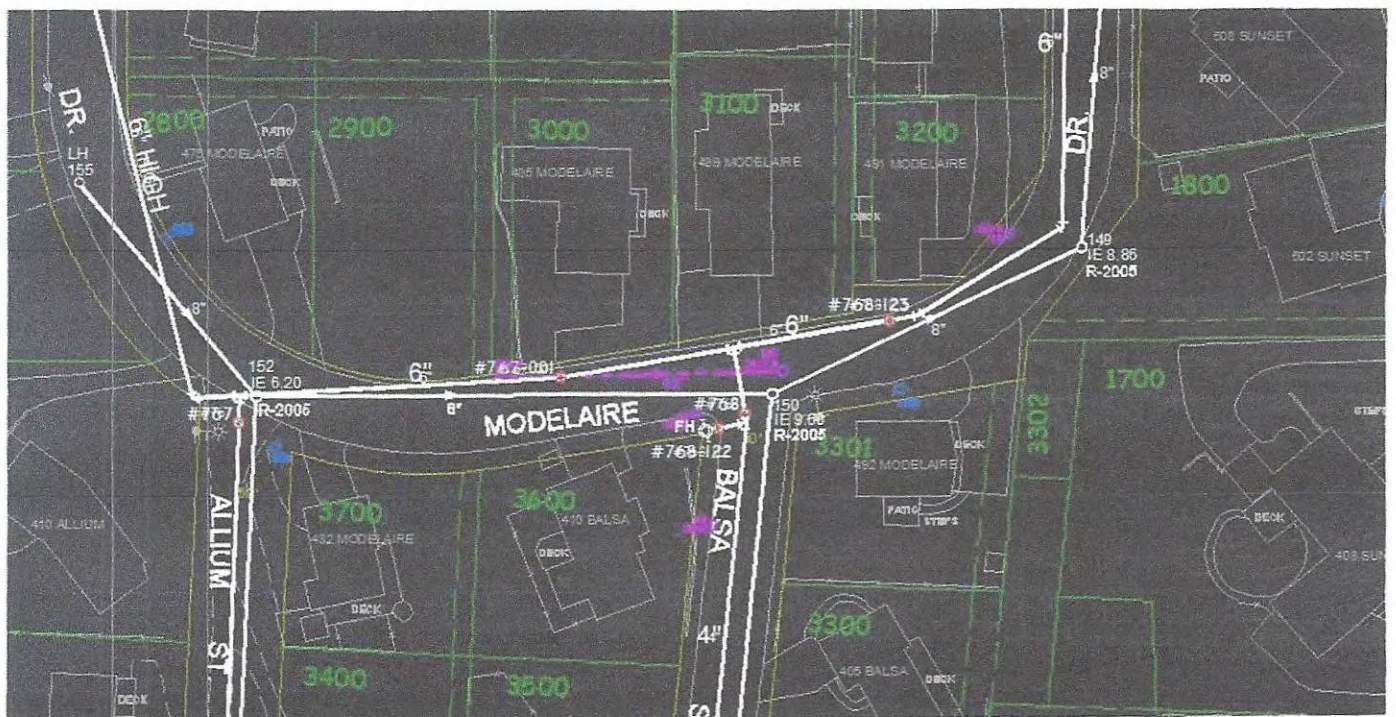
Ph: (541) 962-1325

Fax: (541) 963-4844

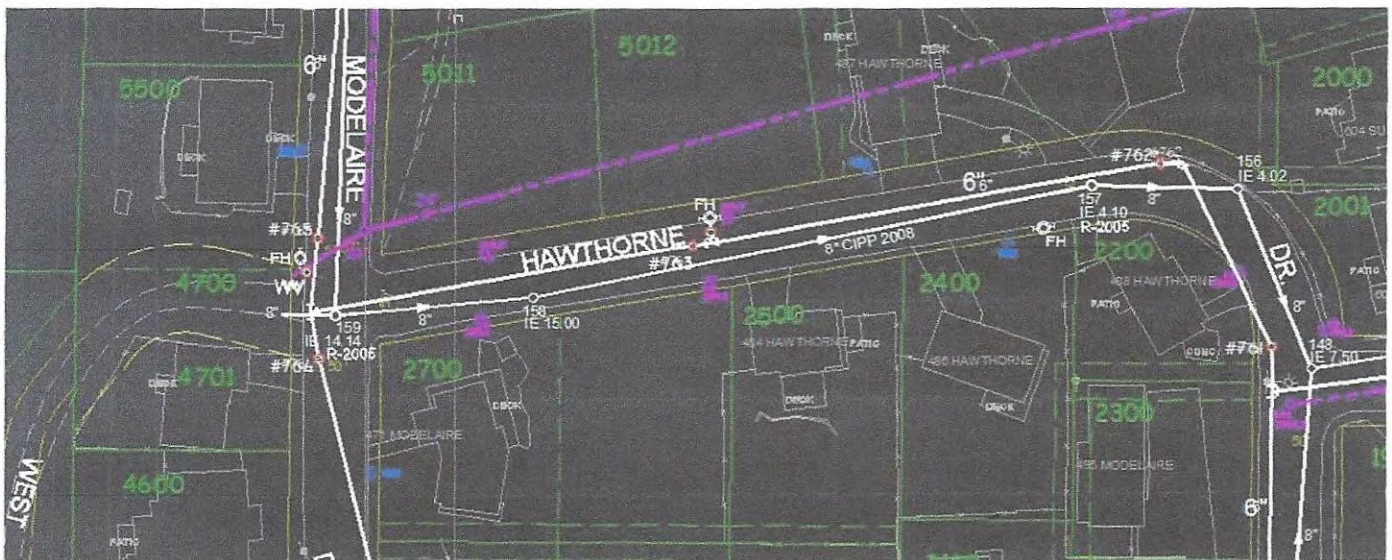
**2 attachments**

**Hawthorne.jpg**  
150K

**Modelaire.jpg**  
120K







attachment U2

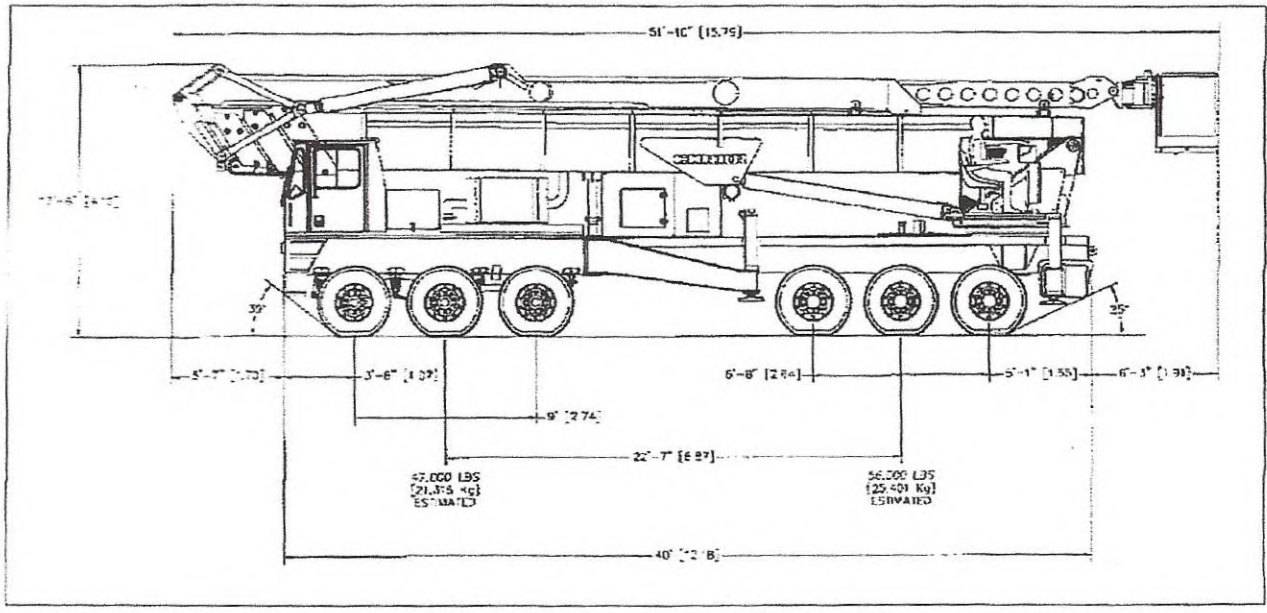


Figure 2. Example Aerial Lift Crane to be Used During Construction (Roadable Length 52 Feet; Width 8 Feet 6 Inches)



The following is a summary of anticipated equipment to be used for each transmission-line construction activity.

- Survey work: pickup trucks or ATVs.
- Timber removal: pickup trucks, feller bunchers, dump trucks, wood chippers.
- Road construction: pickup trucks, bulldozers, motor graders, and water trucks.
- Hole digging, installation of directly embedded structures, or foundation installation: pickup trucks, 2-ton trucks, digger derrick trucks, hole diggers, bulldozers, concrete trucks, water trucks, cranes, hydro cranes, wagon rock drills, dump trucks, and front-end loaders.
- Hauling lattice steel members, tubular poles, braces, and hardware to the structure sites: steel haul trucks, carry alls, cranes, and forklifts.
- Assembly and erection of structures: pickup trucks, 2-ton trucks, carry alls, cranes, and a heavy lift helicopter.
- Wire installation: pickups, wire reel trailers, diesel tractors, cranes, 5-ton boom trucks, splicing trucks, three drum pullers, single drum pullers, tensioner, sagging dozers, carry-alls, static wire reel trailers, bucket trucks, and a light duty helicopter.
- Final cleanup, reclamation, and restoration: pickup trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, hydro-seed truck, and water trucks.

The highest level of traffic will be when the wire stringing operations begin while several other operations are occurring at the same time, which will likely include ROW clearing, installing foundations, hauling steel, and assembling and erecting structures. For the station work, the highest level of traffic will be during site grading and foundation installation. For the communication station sites, the highest level of traffic will be during grading and site preparation.

Detailed estimates of trips generated by transporting Project construction equipment will be provided by the construction contractor prior to construction.

### **3.1.3 Traffic Related to Timber Removal**

In forested areas, the Project will require removal of timber from the Project ROW and for construction and improvement of access roads. Specific timber harvest plans have not been finalized. Logs from timber clearing may be transported to nearby sawmills. Decisions regarding transportation routes for harvested timber will be made following completion of a timber harvest plan, and the number of log truck trips will be estimated when the timber harvest plan has been finalized. Logging slash will remain onsite if possible. For additional discussion regarding removal of timber in forested areas, see Exhibit K, Attachment K-2, ROW Clearing Assessment.

### **3.1.4 Impacts to V/C Ratios**

Based on the estimated trip generation numbers in Tables 4 and 6, a maximum of approximately 1,294 daily one-way vehicle trips are expected within any one construction spread. To facilitate traffic and other analyses, the two construction spreads are divided into smaller sections based on similar construction windows and seasonal weather restrictions. Not all construction sections will have the same number of concurrent construction activities, depending on how the construction contractor sequences and executes the Project. Some sections will have fewer daily vehicle trips. For the purposes of the traffic analysis, the spreads are divided into five sections with multi-use areas that could have additive traffic impacts. The sections are assumed to have approximately equal levels of activity. The 1,294 daily one-way trips per spread divided over five sections of more concentrated traffic results in 259 daily one-

## **ARTICLE 6.6 – PUBLIC STREET STANDARDS**

### **SECTION 6.6.001 - PURPOSE**

Upon the request of the La Grande City Council, a variety of street design standards have been reviewed and are now incorporated in the Land Development Code.

### **SECTION 6.6.002 - CLASS I IMPROVEMENT STANDARDS**

This classification will cover those streets that are designed to meet the standards for an expected life of twenty (20) years or more. The attached drawings shall be the minimum standard for those streets in this classification. All streets designated as Federal Aid Urban Streets (F.A.U.) shall be constructed under these design standards. Streets in this designation shall be constructed with sidewalks when at all possible in an effort to increase pedestrian safety. Collector streets are designed to withstand normal trucks of an HS 20 loading. Larger trucks are to utilize Arterial streets where at all possible. This level of development shall be the ultimate goal for all streets within the City of La Grande.

Possible means of financing available for this Class shall be methods A, B, C, D, E, F, G, and H in Section 6.6.006.

#### **A. Advantages**

1. The construction life is extended to a period above other City standards.
2. The visible aesthetics in relationship to having curbs and a blacktop surface with landscaping or concrete driveways and a sidewalk is generally appealing to the public.
3. Easy maintenance for the Public Works Department for cleaning and minor repair.
4. Storm sewer drainage is confined within the bounds of the curbs during minor flooding periods.
5. Parking is restricted to a solid barrier, that being the curb; this restricts parking in the area on the back side of the curb and confines travel to the street surface.
6. Defined areas for possible cross walks, signs, power poles, and other utilities that are restricted to the outside areas behind the curbs.
7. It allows for a wide range of financing methods and is to City standards for a ten (10) year Bancroft bonding.
8. Provides a dust free surface.

#### **B. Disadvantages**

1. The extreme high level of cost that is incurred with this type of development.

### **SECTION 6.6.003 - CLASS II IMPROVEMENT LEVEL**

Streets constructed in this classification shall be constructed to the same standards as Class I Streets with the exception of the form of drainage system. These streets shall meet the standards as shown on the attached drawing. This level of construction shall be only utilized in substitution for Class I Streets when it is determined by the City Council at the recommendation of the City Engineer or Engineering Superintendent, that an adequate drainage system cannot be installed for a Class I Street.



Table 6. Construction Vehicle Trips per Day per Construction Spread

Construction Crew Type	Construction Vehicles					
	Light Construction Vehicles			Heavy Construction Vehicles		
	Number of Pickups/ Mechanic Trucks (per day)	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)	Number of Other Vehicles	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)
Substation Construction	20	2	40	5	2	10
ROW Clearing	9	4	36	5	4	20
Roads/ Pad Grading	9	4	36	9	2	18
Foundations	9	2	18	5	8	40
Tower Lacing (assembly)	27	2	54	0	0	0
Tower Setting (erection)	20	2	40	0	0	0
Wire Stringing	9	4	36	9	4	36
Restoration	3	2	6	0	0	0
Blasting	5	4	20	0	0	0
Material Delivery	20	8	160	12	2	24
Mechanic and Equipment Mgmt.	5	6	30	0	0	0
Refueling	0	0	0	5	4	20
Dust Control	0	0	0	5	4	20
Construction Inspection	5	8	40	0	0	0
Concrete Testing	5	4	20	0	0	0
Environmental Compliance	9	6	54	0	0	0
Surveyors	5	3	30	0	0	0
<b>Totals</b>	—	—	<b>620</b>	—	—	<b>188</b>

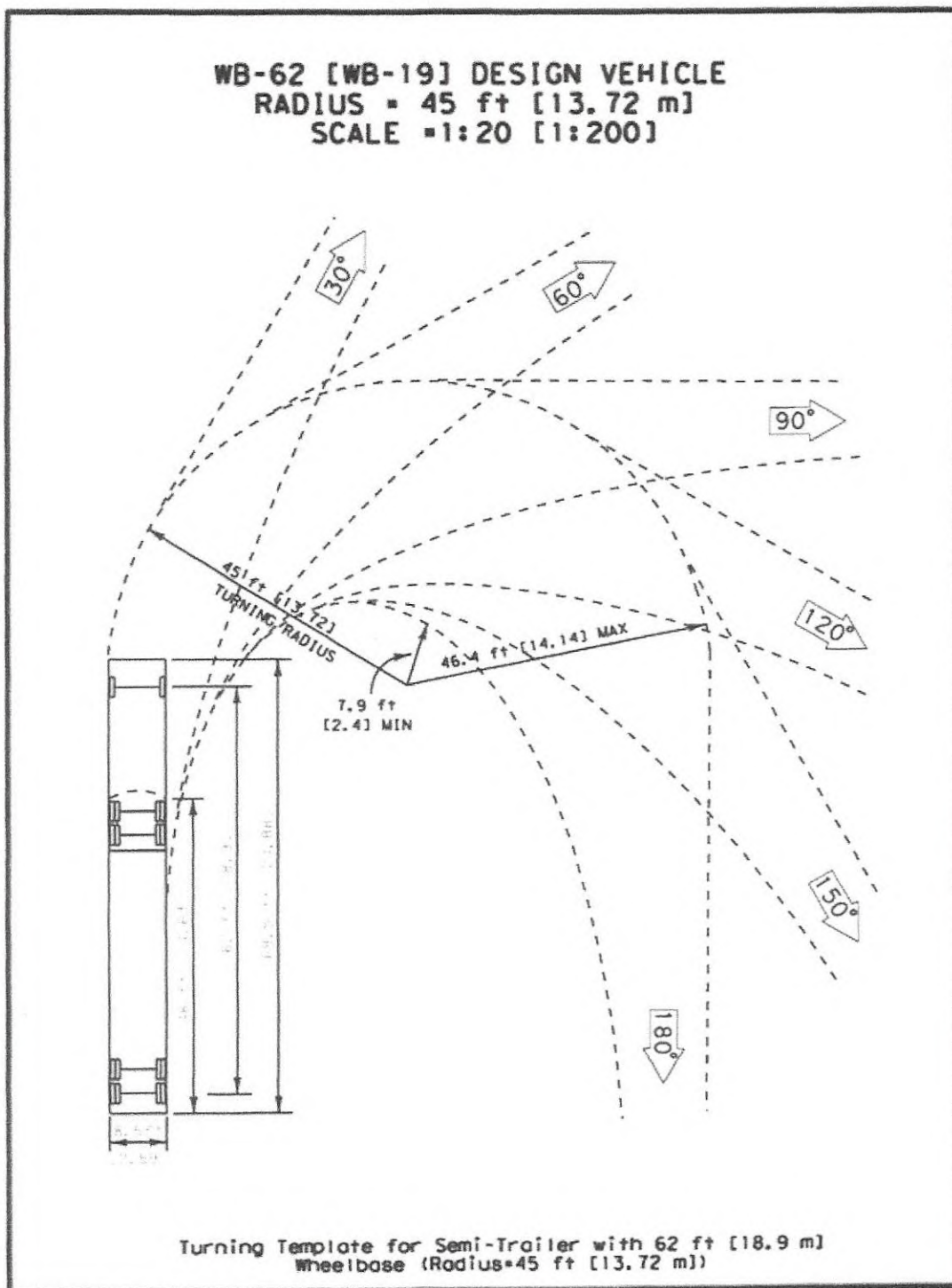
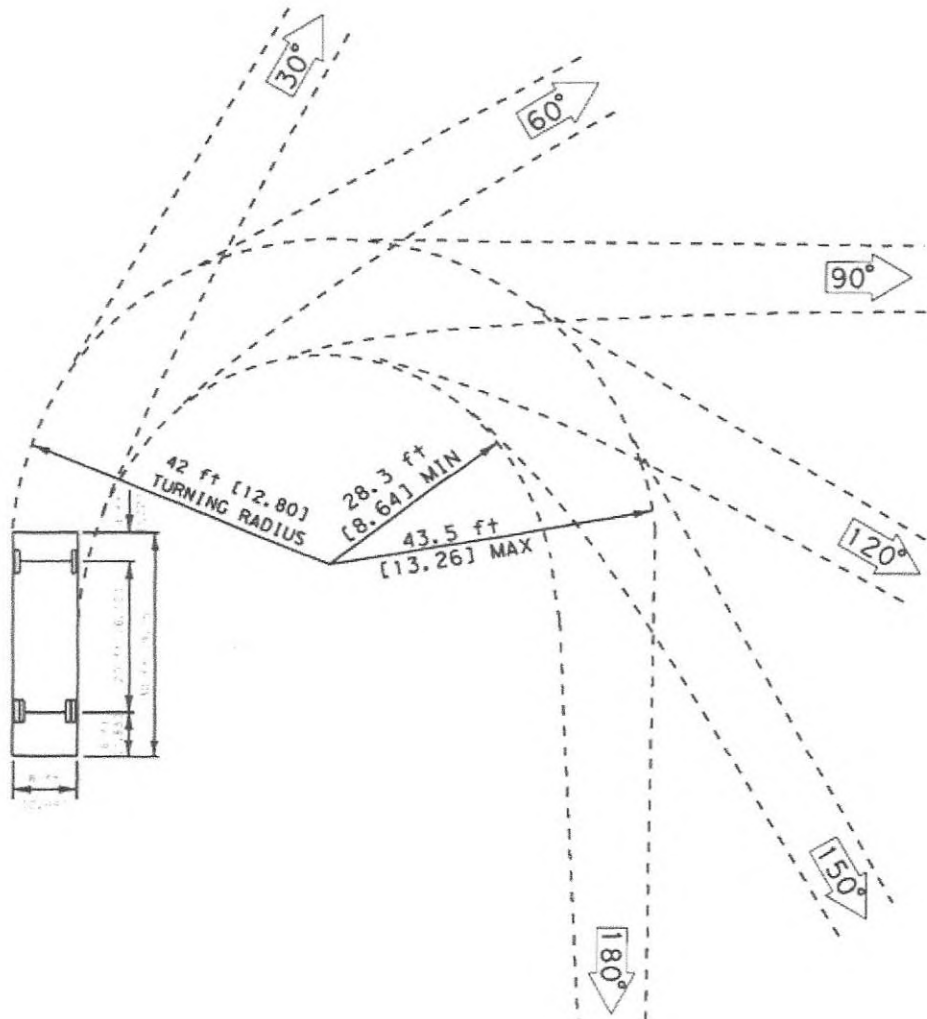


Figure 7-4. Turning Template for Semi-Trailer with 62 ft [18.9 m] Wheelbase, (not to scale). Click [here](#) to see a PDF of the image.



**SINGLE UNIT (SU) TRUCK DESIGN VEHICLE**  
**TURNING RADIUS = 42 ft [12.80 m]**  
**SCALE = 1:20 [1:200]**



Turning Template for Single Unit Trucks or Buses

Exhibit 15

**CITY OF LA GRANDE  
ORDINANCE NUMBER 3077  
SERIES 2009**

**AN ORDINANCE CONTROLLING VEHICULAR AND PEDESTRIAN TRAFFIC, PARADES  
AND PROCESSIONS AND ISSUANCE OF PERMITS; PROVIDING PENALTIES; AND  
REPEALING ORDINANCE NUMBER 2845, SERIES 1993; ALL AMENDING ORDINANCES  
AND ALL OTHER ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HERewith;  
AND DECLARING AN EFFECTIVE DATE**

THE CITY OF LA GRANDE ORDAINS AS FOLLOWS:

**Section 1.** This Ordinance may be cited as the City of La Grande Uniform Traffic Ordinance.

**Section 2.** APPLICABILITY OF STATE TRAFFIC LAWS.

Oregon Revised Statutes, Chapter 153, and the Oregon Vehicle Code, ORS Chapter 801 and 822, as now constituted, are adopted by reference. Violation of an adopted provision of those chapters is an offense against the City.

**Section 3.** DEFINITIONS

In addition to those definitions contained in the Oregon state Motor Vehicle Code, the following words or phrases, except where the context clearly indicates a different meaning, shall mean:

a. Alley

A street or highway primarily intended to provide access to the rear or side of lots or buildings in urban areas and not intended for through vehicular traffic.

b. Bicycle

A bicycle is a vehicle that:

1. Is designed to be operated on the ground on wheels;
2. has a seat or saddle for use of the rider;
3. is designed to travel with not more than three (3) wheels in contact with the ground;
4. is propelled exclusively by human power; and,
5. has every wheel more than fourteen inches (14") in diameter or two (2) tandem wheels, either of which is more than fourteen inches (14") in diameter.

c. Bicycle Lane

That part of the highway, adjacent to the roadway, designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

d. Bicycle Path

A public way, not part of a highway, which is designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

e. Block

The part of one side of a street lying between the two (2) nearest cross streets.

f. Central Business District



a. City Regulation of Special Movement of Oversized Load

The applicant shall submit an application to the City Manager or designee, showing the terminal points of the purported movement; the proposed route; the nature of the movement requested, including the weight and dimensions of the vehicle, load, machine, building, or structure to be moved; the time, date and duration of the proposed movement.

b. Special Movement Permit

A permit shall be required to move any vehicle, structure, or load on, or to access a street when, after preparation for movement, the vehicle, structure or load exceeds fourteen feet (14') in height, requires the use of guy wires, or could result in the blockage of a street. An approved application may serve as a permit, and a copy of the approved application shall be provided to the applicant.

**Section 17. TRUCK ROUTES**

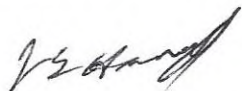
- a. It shall be unlawful for any person, firm, or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes.
- b. Any vehicle with a gross weight over 26,000, pounds specifically picking up deliveries or making deliveries to any business or residence located on a street that is not a truck route will be exempted if the vehicle is driven from the truck route to the destination in the shortest, most direct, and safest route.
- c. The use of Jacob brakes shall not be allowed within the city limits of La Grande, Oregon.
- d. Truck routes will be posted as follows:
  1. Walnut street north from the city limits to C Avenue;
  2. C Avenue east from Walnut Street to Gekeler Avenue;
  3. Gekeler Avenue east to the city limits;
  4. 12th street south from Gekeler Avenue to the city limits;
  5. 2nd Street south from the city limits to Adams Avenue;
  6. Monroe Avenue east from Spruce Street to Highway 82;
  7. Jackson Avenue east from Spruce Street, and
  8. Spruce Street south from the city limits to Monroe.

**Section 18. IMPOUNDMENT AND DETENTION OF VEHICLES**

- a. Whenever a vehicle is placed in a manner or location that constitutes an obstruction to traffic or a hazard to public safety, a police officer or enforcement officer shall order the owner or operator of the vehicle to remove said vehicle. If the vehicle is unattended, the officer or enforcement officer may cause the vehicle to be towed and stored at the owner's expense. The owner shall be liable for the costs of towing and storing, notwithstanding that the vehicle was parked by another or that the vehicle was initially parked in a safe manner but subsequently became an obstruction or hazard.

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE



PRINTED NAME James E. Howell II

ADDRESS 482 Modelaire Dr

EMAIL jhowell12@frontier.com

SIGNATURE



PRINTED NAME Jane Howell

ADDRESS 482 Modelaire DR

EMAIL d.janehowell@gmail.com

SIGNATURE

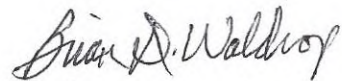


PRINTED NAME Lisa Waldrop

ADDRESS 475 Modelaire Dr.

EMAIL ldjw62@gmail.com

SIGNATURE

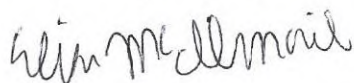


PRINTED NAME BRIAN D. WALDROP

ADDRESS 475 MODELAIRES DR.

EMAIL bdwaldrop58@gmail.com

SIGNATURE



PRINTED NAME EUSE MCILMAIL

ADDRESS 476 MODELAIRES DR.

EMAIL mcilmail154@hotmail.com




I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

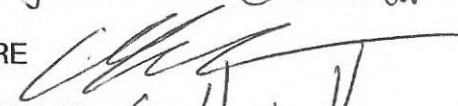
  
Jessie Huxell  
472 Modelaire Dr. LaGrande OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

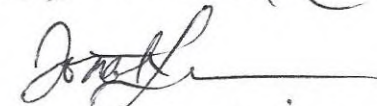
  
C. Huxell  
472 Modelaire Dr. LG, OR 97850  
CHRIS Huxell @ EMAIL.COM

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Jonah Lindeman  
702 Modelaire LaGrande  
jlindeman@rpi.ag

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

Marie Skinner  
Marie Skinner  
208 3rd LaGrande  
marieskinner@hotmail.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

Blake Bars  
Blake Bars  
1101 G Ave La Grande  
blakebars@gmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*D. Dale Mammen*

PRINTED NAME

D. Dale Mammen

ADDRESS

405 BRISA, La Grande, OR

EMAIL

d.mammen@conl.com

SIGNATURE

*Jim Kreider*

PRINTED NAME

Jim Kreider

ADDRESS

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La Grande, OR 97850

EMAIL

jkreider@campblackdog.org

SIGNATURE

*Judie Arritola*

PRINTED NAME

Judie Arritola

ADDRESS

603 Modelaire La Grande, OR

EMAIL

jtol@charter.net

SIGNATURE

*Pasco Arritola*

PRINTED NAME

Pasco Arritola

ADDRESS

603 Modelaire La Grande, OR

EMAIL

PJTOLA@CHARTER.NET

SIGNATURE

*John Garutz*

PRINTED NAME

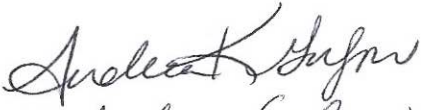
John Garutz


ADDRESS


484 Hawthorne LG, OR 97850


EMAIL


I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE   
PRINTED NAME Andrea Gulzow  
ADDRESS 486 Hawthorne DR, LA Grande  
EMAIL foreverfamily33@aol.com

SIGNATURE   
PRINTED NAME Frances E. Lillard  
ADDRESS 471 Modelaire Dr. L.G.  
EMAIL

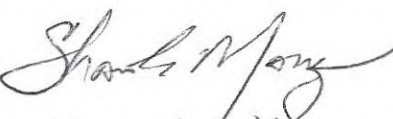
SIGNATURE   
PRINTED NAME Brent H. Smith  
ADDRESS 410 Allium St  
EMAIL smithbrent@gmail.com

SIGNATURE   
PRINTED NAME M. Jeannette Smith  
ADDRESS 410 Allium Street  
EMAIL jeannetterampton@gmail.com

SIGNATURE   
PRINTED NAME KIMBERLEY HEITSTUMAN  
ADDRESS 2409 CENTURY LP, LA GRANDE, OR 97850  
EMAIL kimheitstuman@hotmail.com



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE: 

PRINTED NAME Shawn K. Mangum

ADDRESS 2905 E. M. Ave,

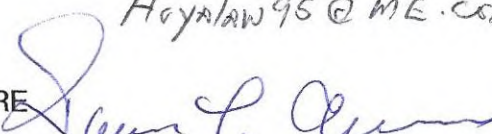
EMAIL Hoyalan95@ME.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
CONNIE L. ALLEN 541-9637720  
410 BALSA STREET LAGRANDE, OREGON 97858  
N/A

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

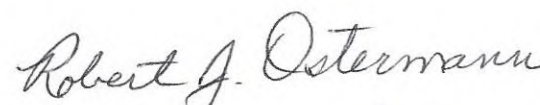
  
Linda Snyder  
491 Modelaire Dr

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
Robert J. Ostermann  
495 Modelaire Dr. La Grande, OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Robin J. Ostermann  
495 Modelaire Dr La Grande, OR 97850



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SIGNATURE

*Jonathan D. White*

PRINTED NAME

Jonathan D. White

ADDRESS

485 Modelaire Dr

EMAIL

jondwhite418@gmail.com

SIGNATURE

*Robin Stedfeld*

PRINTED NAME

Robin Stedfeld

ADDRESS

485 Modelaine Dr. La Grande

EMAIL

rstedfeld@yahoo.com

SIGNATURE

*Rita Allen*

PRINTED NAME

Rita Allen

ADDRESS

410 Balsa St. La Grande Or.

EMAIL

SIGNATURE

*Ruth Schumacher Yeates*

PRINTED NAME

Ruth Schumacher Yeates

ADDRESS

408 Sunset Drive La Grande, OR 97850

EMAIL

ruthschumacheryeates@gmail.com

SIGNATURE

*John Yeates*

PRINTED NAME

JOHN YEATES

ADDRESS

408 SUNSET DR. LA GRANDE, OR 97850

EMAIL

jyeates52@gmail.com


I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE 

PRINTED NAME LOIS BARRY

ADDRESS P.O. Box 566, La Grande, OR 97850

EMAIL loisbarry31@gmail.com

SIGNATURE 

PRINTED NAME CATHY WEBB

ADDRESS 1708 CEDAR ST. LAGRANDE, OR 97850

EMAIL thunkski@gmail.com

SIGNATURE 

PRINTED NAME Jack L. Martin

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EMAIL Buff Martin 27 @GMail .com

SIGNATURE 

PRINTED NAME GERALDINE BRASETH-PALMER

ADDRESS 1602 GILDEREST DRIVE LA GRANDE, Ore 97850

EMAIL 

SIGNATURE 


PRINTED NAME Jean BAPH


ADDRESS 1509 MADISON AVE LaGrande, OR 97850

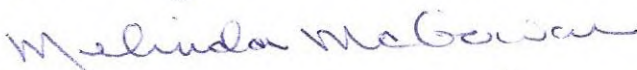
EMAIL Jbaph19@gmail.com





I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE   
PRINTED NAME Damon Sexton  
ADDRESS 401 Balsa St La Grande, OR 97850  
EMAIL Sexton.damon@gmail.com

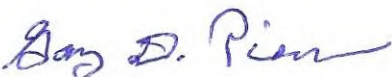
SIGNATURE   
PRINTED NAME Cory Sexton  
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EMAIL Corytrix@gmail.com

SIGNATURE   
PRINTED NAME Melinda McGowan  
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EMAIL melindamegowan@gmail.com

SIGNATURE   
PRINTED NAME Keith D. Hudson  
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EMAIL Keithdhudson@gmail.com

SIGNATURE   
PRINTED NAME Laura Elly Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL ellyhudson@gmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE 

PRINTED NAME Gary D. Pierson

ADDRESS 489 Modelaire Drive, La Grande OR 97850

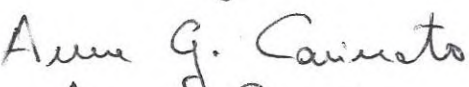
EMAIL —

SIGNATURE 

PRINTED NAME LYNN WHEELER DUNCAN

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EMAIL rlwd1910@gmail.com

SIGNATURE 

PRINTED NAME Anne G. Cavinato

ADDRESS 86 Hawthorne Dr. La Grande, OR 97850


EMAIL acavinat@ecu.edu

SIGNATURE 

PRINTED NAME JOE HORST

ADDRESS 86 HAWTHORNE DR. LA GRANDE OR.

EMAIL joehorst@comi.com

SIGNATURE 

PRINTED NAME ANGELA Sherer

ADDRESS 91 W. Hawthorne Dr. LaGrande, OR 97850

EMAIL asherer@frontier.com



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SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
ADDRESS 97 W Hawthorne Dr, La Grande, Or. 97850  
EMAIL asherer@frontier.com

SIGNATURE *Heather M. Null*  
PRINTED NAME Heather M. Null  
ADDRESS 492 Modelaire Dr. La Grande, OR 97850  
EMAIL hnull@comi.com

SIGNATURE *Bert R. Freewing*  
PRINTED NAME Bert R. Freewing  
ADDRESS 709 South 12<sup>th</sup> Street La Grande, OR 97850  
EMAIL jeanfreewing@gmail.com

SIGNATURE *Lindsey McCullough*  
PRINTED NAME Lindsey McCullough  
ADDRESS 406 Balsa St., La Grande, OR 97850  
EMAIL lindz\_mm91@hotmail.com

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE *Merle E. Comfort*  
PRINTED NAME MERLE E. COMFORT  
ADDRESS 209 SCORPIO DRIVE LA GRANDE OR 97850  
EMAIL merlecomfort@gmail.com

SIGNATURE *Robin L. Maille*  
PRINTED NAME Robin Maille  
ADDRESS 401 Cedar St., La Grande  
EMAIL r-maille@icloud.com

SIGNATURE *Bruce C Kevan*  
PRINTED NAME Bruce C Kevan  
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EMAIL bruce.kevan@lagrandesd.org

SIGNATURE *Carol S. Summers*  
PRINTED NAME CAROL S. SUMMERS  
ADDRESS 2811 Bekeler Ln - La Grande, OR  
EMAIL carolsummers1938@gmail.com

SIGNATURE *Caroline Kaye Juniper*  
PRINTED NAME Caroline Kaye Juniper  
ADDRESS 406 NTH ST. LaGrande - OR 97850  
EMAIL

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*Gerald D. Juniper*

PRINTED NAME Gerald Darwin Juniper

ADDRESS 406 4<sup>th</sup> St. LaGrande, OR. 97850

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:28 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposal Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.14.06.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter sign by me and 46 other residents of La Grande expressing our concerns regarding the B2H Project and requesting that EFSC Deny the Site Certificate.

I have also sent a bound copy of this material by US Postal Service.

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850



August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, Oregon. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the predicted noise levels resulting from construction and operation of the proposed Boardman to Hemingway Transmission Line Project. I would like to address the noise coming from the blasting and rock breaking specifically above the area at the top of Modelaire Drive 1 both to the north and the south of that area and also the construction traffic noise that that will impact the west hills and the area below.

In Exhibit X page X-9 3.3.1.1 2 blasting and rock breaking is mentioned saying that "Modern blasting techniques include the electronically controlled ignition of multiple small explosive charges in an area of rock that are delayed fractions of second, resulting in a total event that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140dBA at the blast location or over 90 dBA within 500 feet." This sounds oh so "don't worry about it, it will be OK just over in a split second." Living in this area off Modelaire Drive, I don't find this at all comforting. And the fact that this will be overseen by properly licensed personnel and all of the necessary authorizations doesn't help anything either.

The area in question, which for such inordinate construction is extremely close to many residents, has been my home for over 50 years and during

related medical problems and exhibit various reactions to loud noises.<sup>10</sup>  
These children also live in the neighborhoods to be affected by the noise so they would be impacted coming and going to school, at home and also while at school. To impose the constant possibility of loud noises is cruel, disrespectful and totally unacceptable. <sup>11</sup>

For a project like this involving blasting and heavy machinery noise so close to homes, schools, and medical facilities impacting hundreds of peoples' daily lives, the day to day agitation, wondering what is coming next, fear and being on constant alert are not just addressed by some type of mitigation but must be addressed by a route that is much less impactful to peoples' safety, sanity, and health.

Sincerely,

A handwritten signature in cursive script that reads "Virginia L. Mammen".

Virginia L. Mammen

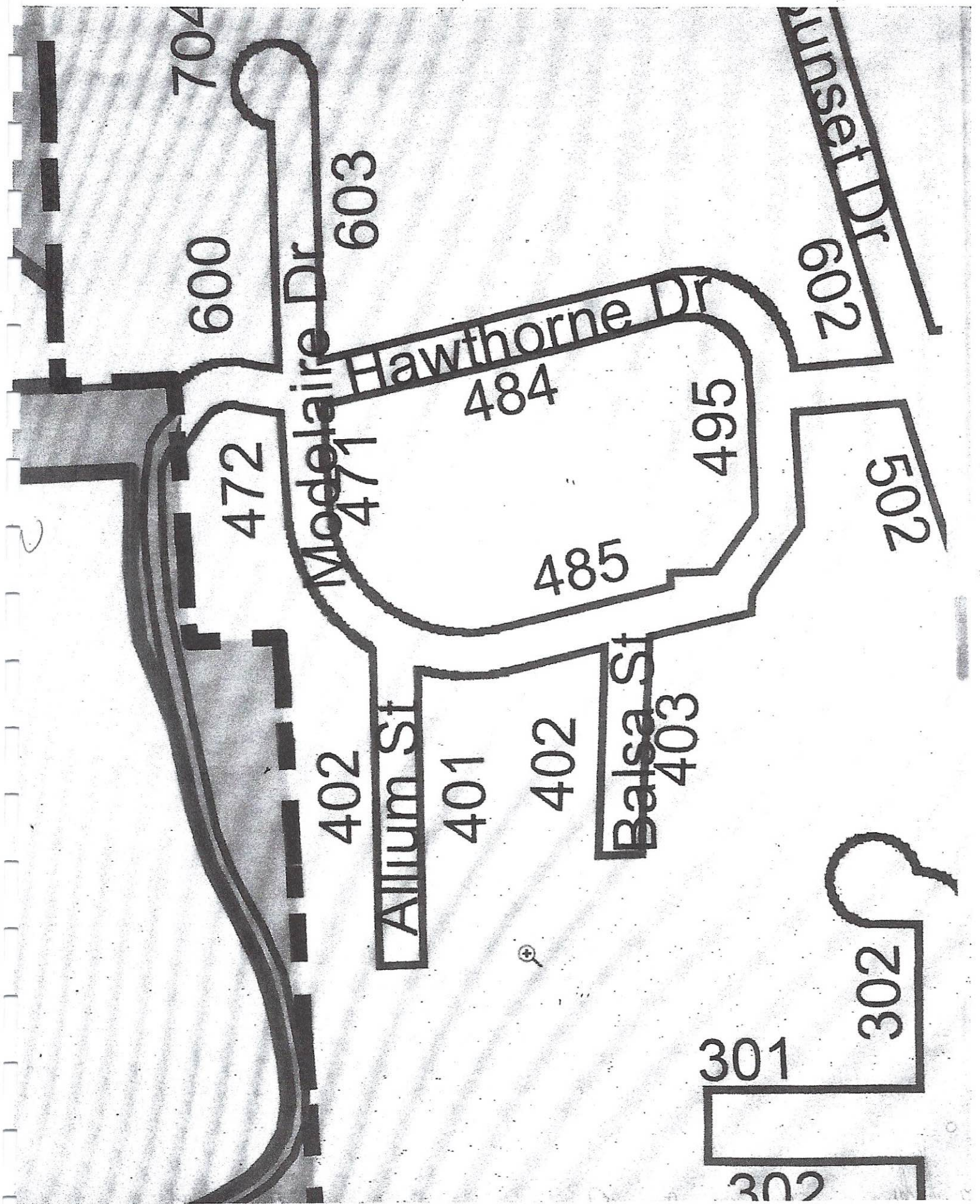
405 Balsa

La Grande, Oregon 97850

gmammen@eoni.com



N





### 3.3 Predicted Noise Levels

OAR 345-021-0010(1)(x)(A): Predicted noise levels resulting from construction and operation of the proposed facility.

#### 3.3.1 Construction Noise

##### 3.3.1.1 Predicted Construction Noise Levels

Project construction will occur sequentially, moving along the length of the Project route, or in other areas such as near access roads, structure sites, conductor pulling sites, and staging and maintenance areas. Overhead transmission line construction is typically completed in the following stages, but various construction activities may overlap, with multiple construction crews operating simultaneously:

- Site access and preparation
- Installation of structure foundations
- Erecting of support structures
- Stringing of conductors, shield wire, and fiber-optic ground wire

The following subsections discuss certain construction activities that will periodically generate audible noise, including blasting and rock breaking, implosive devices used during conductor stringing, helicopter operations, and vehicle traffic.

#### **Blasting and Rock Breaking**

Blasting is a short-duration event as compared to rock removal methods, such as using track rig drills, rock breakers, jackhammers, rotary percussion drills, core barrels, or rotary rock drills. Modern blasting techniques include the electronically controlled ignition of multiple small-explosive charges in an area of rock that are delayed fractions of second, resulting in a total event duration that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140 dBA at the blast location or over 90 dBA within 500 feet.

Lattice tower foundations for the Project typically will be installed using drilled shafts or piers; however, if hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture the rock to reach the required depth to install the structure foundations. Final blasting locations will not be identified until an investigative geotechnical survey of the analysis area is conducted during the detailed design.

The contracted blasting specialist will prepare a blasting plan that demonstrate compliance with applicable state and local blasting regulations, including the use of properly licensed personnel and the acquisition of necessary authorizations. The Framework Blasting Plan is set forth in Exhibit G, Attachment G-5.

#### **Implosive Devices**

An implosive conductor splice consists of a split-second detonation with sound and flash. Implosive splicing activities are anticipated to be limited to daytime hours. A blasting plan will be developed by an individual certified and licensed to perform the work. The plan will communicate all safety and technical requirements including, but not limited to, delineation of the controlled access zone and distance away from residences.



## **Public Services**

### **OAR 345-022-0110**

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## **Waste Minimization**

### **OAR 345-022-0120**

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## **Need for a Facility**

### **OAR 345-023-0005**

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## **Specific Standards for Wind Facilities**

### **OAR 345-024-0010 and 345-024-0015**

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## **Specific Standards for Transmission Lines**

### **OAR 345-024-0090**

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





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## Department of Environmental Quality

### Chapter 340

#### Division 35

#### NOISE CONTROL REGULATIONS

**340-035-0035****Noise Control Regulations for Industry and Commerce****(1) Standards and Regulations:**

(a) **Existing Noise Sources.** No person owning or controlling an existing industrial or commercial noise source shall cause or permit the operation of that noise source if the statistical noise levels generated by that source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 7, except as otherwise provided in these rules. [Table not included. See ED. NOTE.]

**(b) New Noise Sources:**

(A) **New Sources Located on Previously Used Sites.** No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies. [Table not included. See ED. NOTE.]

**(B) New Sources Located on Previously Unused Site:**

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b)-(f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

**(iii) For noise levels generated or caused by a wind energy facility:**

(I) The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

(II) The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with wind speed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.

(III) The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

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(2) Compliance. Upon written notification from the Director, the owner or controller of an industrial or commercial noise source operating in violation of the adopted rules shall submit a compliance schedule acceptable to the Department. The schedule will set forth the dates, terms, and conditions by which the person responsible for the noise source shall comply with the adopted rules.

(3) Measurement:

(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

(B) That point on the noise sensitive property line nearest the noise source.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);

(b) Nothing in this rule shall preclude the Department from conducting separate or additional noise tests and measurements. Therefore, when requested by the Department, the owner or operator of an industrial or commercial noise source shall provide the following:

(A) Access to the site;

(B) Reasonable facilities, where available, including but not limited to, electric power and ladders adequate to perform the testing;

(C) Cooperation in the reasonable operation, manipulation, or shutdown of various equipment or operations as needed to ascertain the source of sound and measure its emission.

(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:

(a) Emergency equipment not operated on a regular or scheduled basis;

(b) Warning devices not operating continuously for more than 5 minutes;

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

(d) Sounds resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad only to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; but this exemption does not apply to any standard, control, license, regulation, or restriction necessitated by special local conditions which is approved by the Administrator of the EPA after consultation with the Secretary of Transportation pursuant to procedures set forth in Section 17(c)(2) of the Act;

(e) Sounds created by bells, chimes, or carillons;

(f) Sounds not electronically amplified which are created by or generated at sporting, amusement, and entertainment events, except those sounds which are regulated under other noise standards. An event is a noteworthy happening and does not include informal, frequent, or ongoing activities such as, but not limited to, those which normally occur at bowling alleys or amusement parks operating in one location for a significant period of time;

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment;

(i) Sounds created by lawn care maintenance and snow removal equipment;

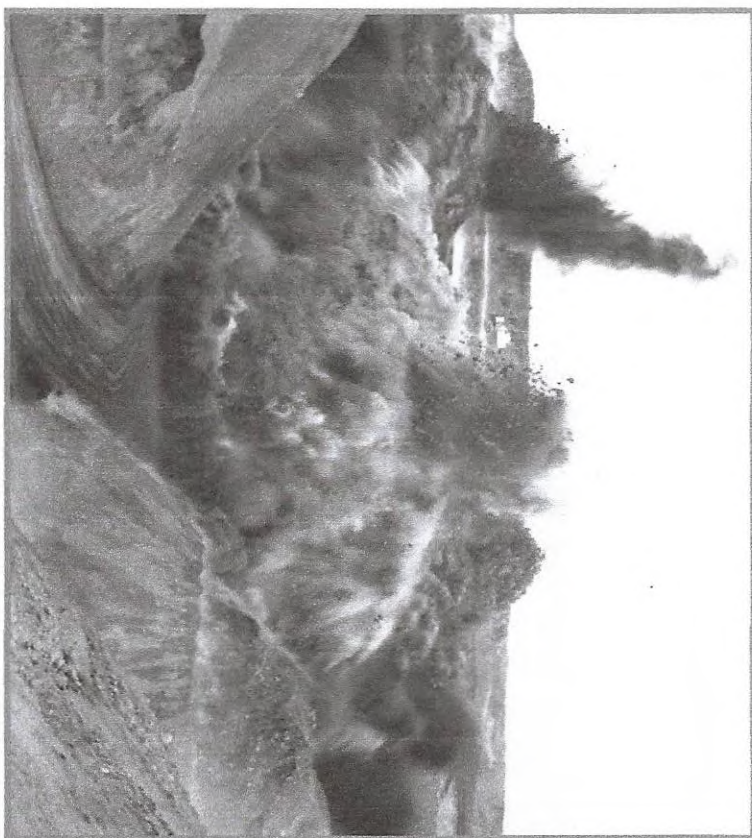
(j) Sounds generated by the operation of aircraft and subject to pre-emptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not pre-emptively regulated by the federal government or controlled under OAR 340-035-0045;

## Controlling the Adverse Effects of Blasting

This module addresses the control of offsite impacts that result from blasting, namely:

- vibrations,
- airblast, and
- flyrock.

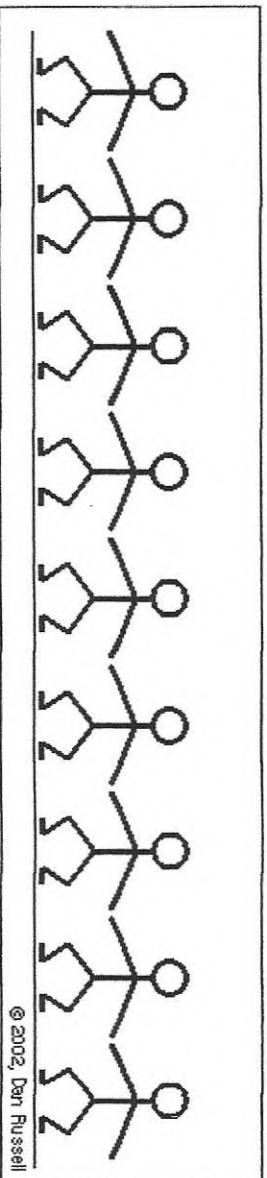
Much of the information in the module is derived from the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The performance standards apply to all surface coal mines. Similar standards have been adopted on some State and local levels and applied to non-coal blasting operations such as quarrying and construction.





## Part I: Ground Vibrations, Airblast, and Flyrock

Explosive energy is used to break rock. However, the use of this energy is not 100-percent efficient. Some of the energy escapes into the atmosphere to generate **airblast or air vibrations**. Some of the energy also leaves the blast site through the surface soil and bedrock in the form of **ground vibrations**.



Both air and ground vibrations create waves that disturb the material in which they travel. When these waves encounter a structure, they cause it to shake. Ground vibrations enter the house through the basement and airblast enters the house through the walls and roof.

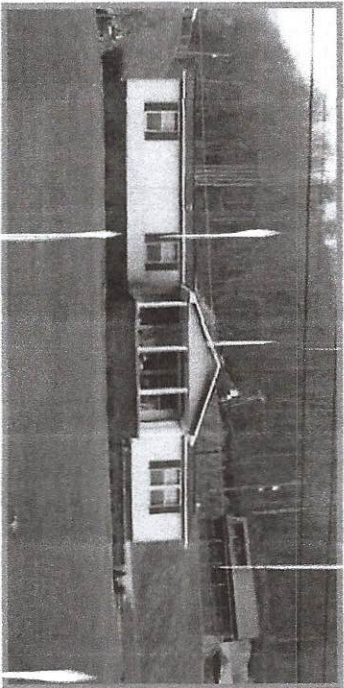
Airblast may be audible (noise) or in-audible (concussion). When outside a house the blast may be heard because of the noise, however noise has little impact on the structure. The concussion wave causes the structure to shake and rattles objects hanging on walls or sitting on shelves. This "interior noise" will alarm and startle people living in the house.

**Flyrock** is debris ejected from the blast site that is traveling through the air or along the ground. Flyrock the single most dangerous adverse effect that can cause property damage and personal injury or death.



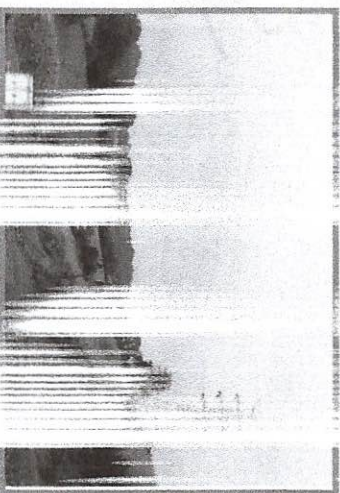
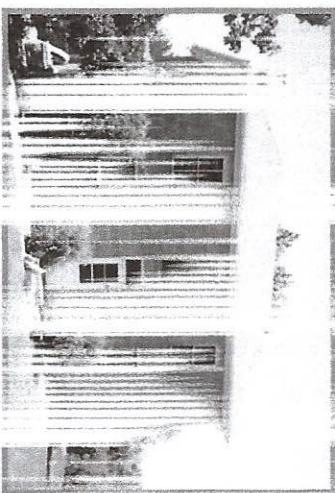
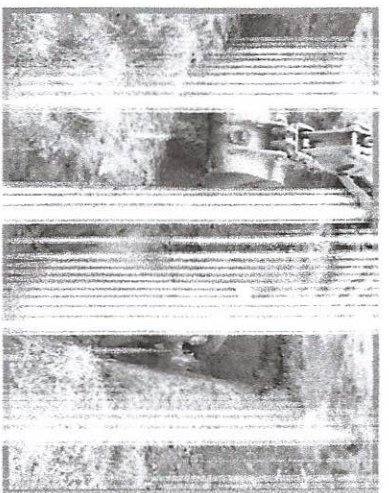
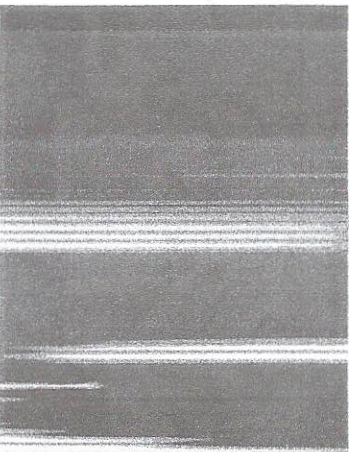
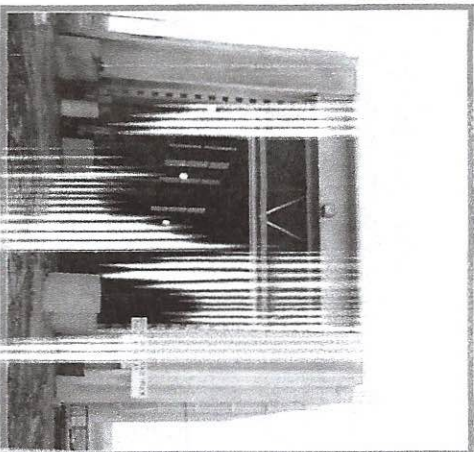
# Blasting Impacts on Structures

Both above-ground and below-ground structures are susceptible to vibration impacts. Structures can include onsite mine offices and buildings, as well as offsite residences, schools, churches, power-transmission lines, and buried pipelines. Some of these structures may include historic or cultural features sensitive to even low levels of vibrations.



It is important to understand:

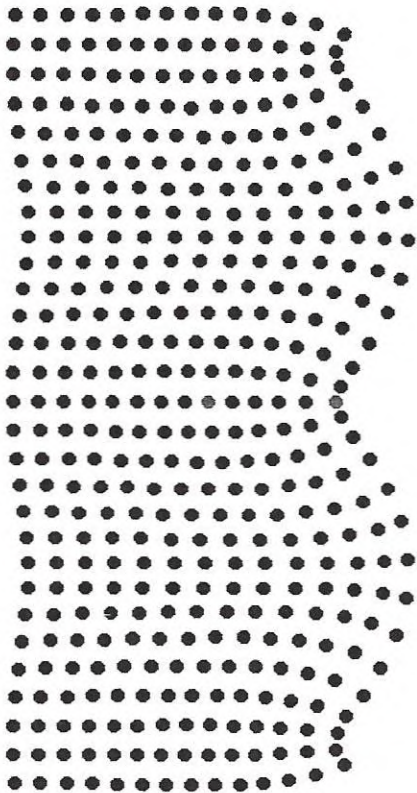
1. the causes of ground vibrations and airblast, and
2. what practices can be followed to control and minimize the adverse effects





# Ground Vibrations

Ground vibrations propagate away from a blast site as Rayleigh (or surface) waves. These waves form a disturbance in the ground that displaces particles of soil or rock as they pass by. Particle motions are quite complicated. At the ground surface (free boundary), measured particle motions have the greatest displacements, and displacements decrease with depth (see the illustration below). At a depth of between 20 to 50 feet below ground surface, particle displacements are barely detectable. Structures that are well coupled to the ground tend to move with this motion; structures buried in the ground are less affected by surface motions.



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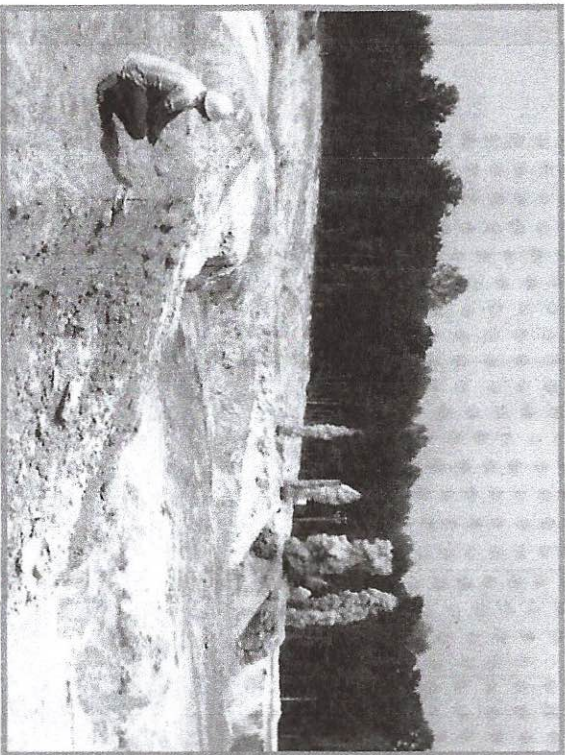
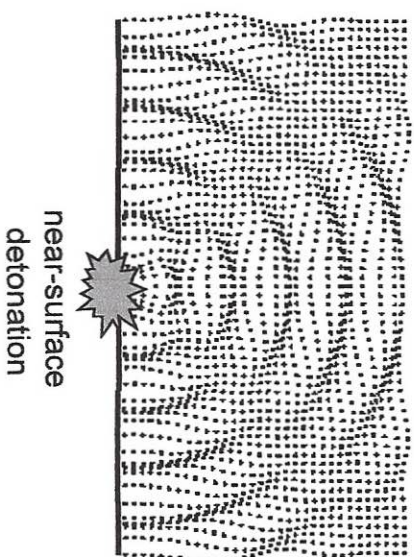
Ground vibrations are measured in terms of **particle velocity** and are reported in inches per second (ips) or the speed at which a particle of soil or rock moves.

At typical blasting distances from residential structures, the ground only moves with displacements equal to the thickness of a piece of writing paper. In terms of displacement, this equates to hundredths of an inch; visually, such movement cannot be detected.

# Airblast

2 Airblast is measured as a pressure in pounds per square  
5 inch (psi) and is often reported in terms of **decibels (dB)**.

Airblast is a pressure wave that that may be audible or in-audible. Elevated airblast levels are generated when explosive energy in the form gases escape from the detonating blast holes. Energy escapes either through the top stemming or through fractures in the rock along the face or at the ground surface.



Airblast radiates outward from the blast site in all directions and can travel long distances. Sound waves travel much slower (1,100 ft/s) than ground vibrations (about 5,000 – 20,000 ft/s). Hence, airblast arrives at offsite structures later than do ground vibrations.

Both ground vibrations and airblast cause structures to shake structures. Occupants in structures that are located far from a blast may experience shaking from vibration and airblast as two separate, closely spaced events. This can be particularly bothersome, as it prolongs the duration of structure shaking and leads the property owner to think that two separate blasts occurred.



# Structure Response

As ground and air vibrations reach a structure, each will cause it to shake. Structure response is dependant on the vibration characteristics (frequency and amplitude) and structure type.

Ground Vibrations enter the house through the basement. This is like shaking the bottom of a flag pole. Movement at the top of the pole depends on how (frequency) and how hard (amplitude) the bottom of the pole is shaken. If shaken at just the right pace, or at the pole's natural frequency, the top will move significantly compared to the bottom. Motion at the top is amplified from the bottom motion.

All blast damage studies have measured incoming ground vibrations at the ground surface. The observed structure amplifications were typically between 1 to 4 times the ground vibration. Structure response below ground level is the same or less than the incoming vibrations

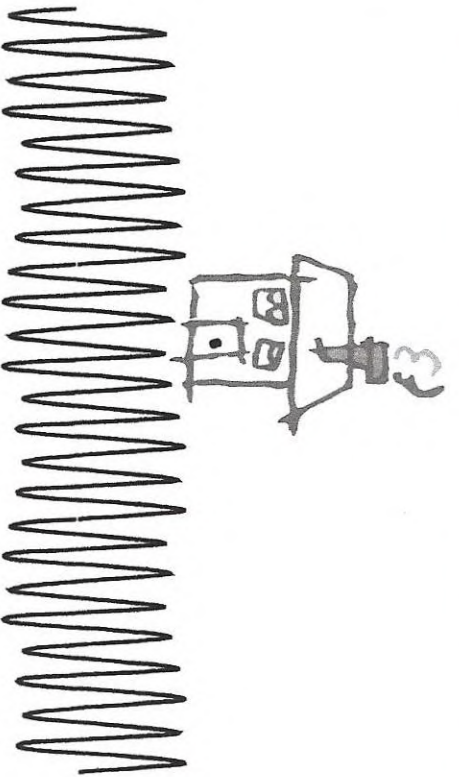
Airblast enters the house through the roof and walls. Like ground vibrations, the frequency and amplitude of the vibrations affect structure response. However the low frequency events (concussion) that most strongly affect structures is normally only a one or two cycle event.

Due to the different arrival times of ground and air vibrations, occupants may feel two distinct impacts on the house.



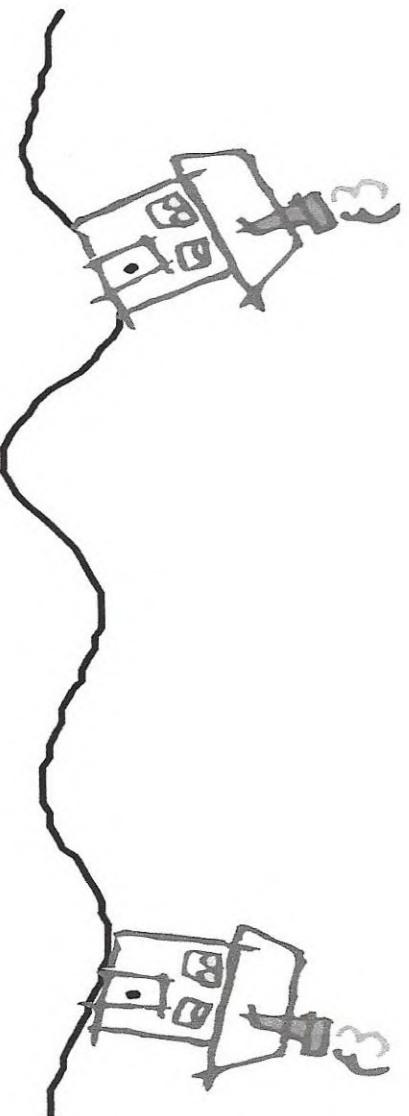
# Ground Vibration Structure Response

Exhibit 59



High frequencies do not promote structure shaking. The length of a single high-frequency wave cycle is short as compared with the dimension of a structure. A structure does not significantly respond to high frequencies.

On the other hand, low-frequency wave cycles are long as compared with the dimensions of structures. Accordingly, low frequencies tend to efficiently couple energy into structures and to promote higher-amplitude, long-duration shaking.





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### Harvard Men's Health Watch

## A noisy problem

**People often become more sensitive to noise as they age, which can affect their mental and physical health.**

Published: March, 2019

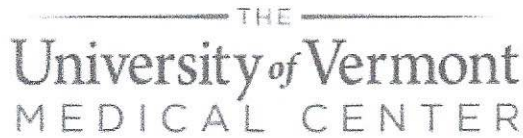


Image: © Juanmonino/Getty Images

Are you more sensitive to noises than you used to be? Do certain sounds now feel too loud and jarring? Don't worry; it's actually quite normal.

Age-related hearing loss is common among older adults and affects about two-thirds of men in their 70s and 85% of men ages 80 and older. Although it's not clear why, this can also make people hypersensitive to sounds that they used to tolerate easily, which in turn can affect their well-being.

"Exposure to noises from crowds, traffic, and other everyday sounds can become harder to tolerate and increase stress levels, leading to anxiety and a reduction in overall quality of life," says Dr. Stephanie Tompkins, an audiologist with Harvard-affiliated Massachusetts Eye and Ear. "As your sensitivity to noises increases, this can lead to greater isolation, too, as you may try to avoid potentially noisy places and situations."



(<https://medcenterblog.uvmhealth.org/>)

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Quiet in the Hospital: How Noise...

# Quiet in the Hospital: How Noise Reduction Helps Patients Heal

on June 7, 2018 (<https://medcenterblog.uvmhealth.org/innovations/hospital-noise-reduction/>) in Innovation  
(<https://medcenterblog.uvmhealth.org/category/innovations/>) by UVM Medical Center  
(<https://medcenterblog.uvmhealth.org/author/uvmmedcenter/>)

Noise. It is present in almost every aspect of our lives. From the traffic in the streets, to the fan that provides us white noise in the background to sleep, noise exists. Unfortunately, like stress, too much of it can have a negative impact on a person's health and rest. Some sounds we do like to hear, such as birds chirping, signaling spring in Vermont, but what about sounds in a hospital?

Many of us get admitted to hospitals when we are too sick to take care of ourselves at home. We expect exceptional care from physicians and nurses and, of course, to rest in order to help our bodies heal. We understand that some noises in a hospital are necessary for care; however, others simply aren't.

## The Sounds of a Hospital

Many organizations, including the UVM Medical Center, have high tech equipment, which greatly assists in the delivery of care to our patients, but can also be noisy. Sometimes, healthcare providers are the source of the noise as we interact and communicate with our patients and other health team members.

Another factor is visits from families and friends during visiting hours. It is difficult when one's roommate is trying to rest in the opposite bed. Yet, we need to be cognizant of noise in patient care areas as sounds can be magnified and misinterpreted, increasing agitation and even confusion for some patients.

We become accustomed to the noise; our patients are not.

## The Research on Noise, Quiet, and Healing



Research has shown that noise plays a negative role in healing and that decreasing noise in patient care areas aids in healing processes and helps facilitate speedier recoveries for patients. Patients are able to heal, sleep better and recover more quickly when able to rest. A quieter environment can also help decrease burnout for hospital staff.

Studies show that patients are more likely to develop negative side effects from a noisy hospital, such as sleep disturbances, elevated blood pressure and heart rate, and increased use of pain medications.

Noise can also increase annoyance levels for staff. One study indicated noise, such as talking inside and outside patient rooms, is the most common source of noise as well as visitors' voices, TVs, and behaviors of other patients.

Research concluded that best practices to eliminate noise from talking included staff education about noise reduction, public indicators such as sound monitors, a quiet time protocol, and lower cost environmental fixes, such as fixing noisy doors and squeaky wheels. Lastly, by introducing scripting with routine monitoring, patients' perception of quietness increased and the perception of noise decreased.

## How We Address Noise at the UVM Medical Center

We introduced the "Culture of Quiet" Organizational initiative. The Nursing Professional Governance Patient and Family Experience Global council continued this work. After convening a small task force of nurses and assessing current quiet strategies, we introduced the following tactics:

- Many hospital units have designated 'quiet hours' with automatically dimming of lights at quiet hour intervals.
- Signage is visible in most patient care areas to help keep patients, family, and visitors aware. Throughout the hospital, you will see signs with a relaxing pair of Adirondack chairs and the sun setting with details on when a unit has quiet hours.
- Many semi-private rooms have windows in doors, so doors can be closed allowing for patient rest.
- We offer headphones for TVs and earplugs to help minimize sounds.
- In-patient kits contain a sleeping mask and other comfort items that can be provided at time of admission. Each kit contains a card and explains, 'the best healing occurs in a quiet environment.'
- New education material is available for staff, patients and visitors-just ask to review the next time visiting.
- Some units offer white noise machines, others have this built in.
- Noisy equipment such as wheels and doors can be tagged and replaced.
- Our facility and distribution staff have changed their cleaning and supply delivery schedules to accommodate patient care.
- Healthcare teams within the hospital are focusing efforts to cluster patient care to minimize interruptions to provide restful moments.

## How you can help us.

We ask patients and visitors to hold us accountable when sounds are too loud. We want our community to alert us when noise levels are high and we will do what we can to minimize sound. In turn, we ask that all members of the healthcare team, patients, family, and friends be aware to keep voices soft, cell phones on vibrate, and hold each other accountable for these are the times of the day when our patients take pause to rest and positively impact their healing.

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# Dangerous Decibels: Hospital Noise More Than a Nuisance

By Diane Sparacino, Staff Writer

Imagine a world where hospitals have become so noisy that the annoyance has topped hospital complaints, even more than for the tasteless, Jell-O-laden hospital food (Deardorff, 2011). If you're a nurse, you know that we're already there – with noise levels reaching nearly that of a chainsaw (Garcia, 2012). In fact, for more than five decades, hospital noise has seen a steady rise (ScienceDaily, 2005).

But it wasn't always that way. At one time, hospitals were virtually noise-free like libraries – respected spaces, preserved as quiet zones. The culture was such that a loud visitor might be silenced by a nurse's purposeful glare or sharply delivered "Shhh!" As early as 1859, the importance of maintaining a quiet environment for patients was a topic for discussion. In Florence Nightingale's book, "Notes on Nursing," she described needless noise as "the most cruel absence of care" (Deardorff, 2011).

Fast forward to 1995, when the World Health Organization (WHO) outlined its hospital noise guidelines, suggesting that patient room sound levels not exceed 35 decibels (dB). Yet since 1960, the average daytime hospital noise levels around the world have steadily risen to more than double the





acceptable level (from 57 to 72 dB), with nighttime levels increasing from 42 to 60 dB. WHO found that the issue was not only pervasive, but high noise levels remained fairly consistent across the board, despite the type of hospital (ScienceDaily, 2005).

Researchers at Johns Hopkins University began to look into the noise problem in 2003. They maintained that excessive noise not only hindered the ability for patients to rest, but raised the risk for medical errors. Other studies blamed hospital noise for a possible increase in healing time and a contributing factor in stress-related burnout among healthcare workers (ScienceDaily, 2005).

Technology is, of course, partly to blame. State-of-the-art machines, banks of useful alarms, respirators, generators, powerful ventilation systems and intercoms all add up to a lot of unwanted racket. When human voices are added to the mix, (i.e., staff members being forced to speak loudly over the steady din of medical equipment), it's anything but a restful environment. For the recovering patient in need of sleep, that can be a real issue (Deardorff, 2011).

Contributing to the problem, experts say, are the materials used in hospitals. Because they must be easily sanitized, surfaces cannot be porous where they could harbor disease-causing organisms. Rather than using noise-muffling materials like carpet, acoustic tiles and other soft surfaces, hospitals have traditionally been outfitted using smooth, hard surfaces – especially in patient rooms. Good for cleanliness – not so great for dampening sounds, which tend to bounce around the typical hospital (Deardorff, 2011).

Which brings us to the most recent research, published January 2012 in the *Archives of Internal Medicine*. In the report, Jordan Yoder, BSE, from the Pritzker School of Medicine, University of Chicago, and his colleagues associated elevated noise levels with “clinically significant sleep loss among hospitalized patients,” perhaps causing a delay in their recovery time (Garcia, 2012). During the 155-day study period, researchers examined hospital sound levels. The numbers far exceeded (WHO) recommendations for average hospital-room noise levels, with the peak noise at an average 80.3 dB – nearly as loud as a chainsaw or electric sander (85 dB), and well over the recommended maximum of 40 dB. And while nights tended to be quieter, they were still noisier than recommended allowances, with “a mean maximum sound level of 69.7 dB” (Garcia, 2012).

Perhaps most interestingly, the researchers broke down the sources of noise into categories: “Staff conversation (65%), roommates (54%), alarms (42%), intercoms (39%), and pagers (38%) were the most common sources of noise disruption reported by patients” (Garcia, 2012). “Despite the importance of sleep for recovery, hospital noise may put patients at risk for sleep loss and its associated negative effects,” they wrote. In addition, researchers found that the intensive care and surgical wards had some work to do in dampening noise levels, with ICU peaking at 67 dB and 42 dB for surgical areas. Both far exceeded WHO’s 30 dB patient room recommendation (Garcia, 2012).

Besides patient sleep deprivation, which itself can lead to a multitude of health problems including high blood sugar, high blood pressure and fatigue, studies have reported that elevated noise levels can increase heart and respiratory rates, blood pressure and cortisol levels. Recovery room noise causes patients to request more pain medication, and preterm infants “are at increased risk for hearing loss, abnormal brain and sensory development, and speech and language problems when exposed to prolonged and excessive noise” (Deardorff, 2011).

There is still more research to be done, of course, but Yoder and his colleagues had good news, as well; much of the hospital noise they identified is modifiable, suggesting that hospitals can take steps to successfully create a quieter environment for both patients and healthcare providers (Garcia, 2012).

Around the country, "quiet campaigns" have been launched by hospitals in an attempt to dampen nighttime noise. Besides dimming lights and asking staff to keep their voices down at night, they are working to eliminate overhead paging systems, replace wall and/or floor coverings – even the clang of metal trashcans. Northwestern's Prentice Women's Hospital in Chicago was built with noise reduction in mind, replacing the idea of centralized nursing stations with the advent of smaller, multiple stations (Deardorff, 2011)

Billed as "one of the nation's largest hospital construction projects," Palomar Medical Center in North San Diego County is a state-of-the-art facility that has been designed "to encourage quietness," according to Tina Pope, Palomar Health Service Excellence Manager. Slated to open its doors this August, the hospital will feature a new nursing call system to route calls directly to staff and help eliminate the need for overhead paging, de-centralized nursing stations and clear sig lines, allowing staff to check on patients without having to leave unit doors open. With measures already in place including "Quiet Hospital" badges on staff and posters at the entrance of every unit, a "Quiet at Night" campaign (9 p.m. – 6 a.m.), and a "Quiet Champions" program that encourages staff to report noise problems, Palomar is one of a growing number of hospitals working toward a new era of quiet.

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## Noises Are Truly Horrible For People Who Have PTSD

20 Mar '2018 [Sound](#)

Noise is a really big issue for PTSD survivors: people who have mental health problems because of their traumas. How are they connected?

Almost everybody has experienced a trauma. But some traumas are more scarring than others and can even result in long-lasting mental disorders like **PTSD**, which can have an extreme impact on someone's life. It's a disorder that can develop in the brain after a horrifying experience, like war or a car crash.

### Symptoms

The symptoms of PTSD are, to say the least, not pleasant. They range from nightmares about the traumatic events, disturbing thoughts and feelings, anxiety, trying to avoid anything that has something to do with the traumatic event, and an increase in the fight-or-flight response.

Around ten percent of the population suffers from PTSD, according to data from **NCBI**, a part of the US National Library of Medicine. And, remarkably enough, that percentage is the same for people who suffer from tinnitus (the sound of a constant beep in your ears). The NCBI clearly sees a link between the two.

PTSD survivors also suffer from the Exaggerated Startle Syndrome, with anxiety and actions in an extreme and irrational way too loud noises and bangs. And then there are the sounds that remind them of the sounds during the traumatic events, which can trigger memories of the





## Fear

PTSD can also cause a general fear of sounds: phonophobia, or a fear of some specific sounds: misophonia. Survivors of the disorder also are generally much more sensitive to sounds and perceive them as much louder than other people would.

All of this makes the life of people with PTSD very hard. If you think you are suffering from this, consult your doctor. Really, please do it. For yourself, and for the ones you love.

Do you have PTSD and would you like to tell your experiences to us? We are always very open and interested to hear what you have to say. And again: if you haven't done it yet, visit your doctor, please. Thank you!

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## Does noise affect learning? A short review on noise effects on cognitive performance in children

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### Abstract

The present paper provides an overview of research concerning both acute and chronic effects of exposure to noise on children's cognitive performance. Experimental studies addressing the impact of acute exposure showed negative effects on speech perception and listening comprehension. These effects are more pronounced in children as compared to adults. Children with language or attention disorders and second-language learners are still more impaired than age-matched controls. Noise-induced disruption was also found for non-auditory tasks, i.e., serial recall of visually presented lists and reading. The impact of chronic exposure to noise was examined in quasi-experimental studies. Indoor noise and reverberation in classroom settings were found to be associated with poorer performance of the children in verbal tasks. Regarding chronic exposure to aircraft noise, studies consistently found that high exposure is associated with lower reading performance. Even though the reported effects are usually small in magnitude, and confounding variables were not always sufficiently controlled, policy makers responsible for noise abatement should be aware of the potential impact of environmental noise on children's development.

**Keywords:** noise, cognitive performance, cognitive development, children, speech perception, listening comprehension, irrelevant sound effect, classroom acoustics



In everyday life, cognitive tasks are often performed in the presence of task-irrelevant environmental noise. Accordingly, numerous studies on noise effects on performance have been conducted since the middle of the 20th century (for reviews see Hellbrück and Liebl, 2007; Szalma and Hancock, 2011), showing that—depending on characteristics of sounds and tasks—noise of low to moderate intensity may in fact evoke substantial impairments in performance.

Most of these studies were conducted with adults. The present review, however, will focus on studies including children. Children are especially vulnerable to harmful effects of environmental noise, as cognitive functions are less automatized and thus more prone to disruption. We will report findings concerning effects of acute noise on performance in concurrent auditory and non-auditory tasks, as well as effects of chronic noise on children's cognitive development.

### Effects of acute noise on children's performance in auditory tasks

Psychoacoustic studies have consistently shown that children's speech perception is more impaired than adults' by unfavorable listening conditions. The ability to recognize speech under conditions of noise or noise combined with reverberation improves until the teenage years (Johnson, 2000; Wightman and Kistler, 2005; Talarico et al., 2007; Neuman et al., 2010). With stationary noise makers, signal-to-noise ratios (SNRs) have to be 5–7 dB higher for young children when compared to adults in order to achieve comparable levels of identification of speech or nonspeech signals, with adult-like performance reached at about 6 years of age (Schneider et al., 1989; Fallon et al., 2000; Werner, 2007). However, with maskers that vary over time, i.e., with trial-by-trial variation of the maskers' spectral composition (Oh et al., 2001; Hall et al., 2005; Leibold and Neff, 2007) or with fluctuating maskers such as single-talker speech (Wightman and Kistler, 2005), adult-like performance is usually not reached before the age of 10 years. Furthermore, children are less able than adults to make use of spectro-temporal and spatial cues for separation of signal and noise (Wightman et al., 2003; Hall et al., 2005). These findings demonstrate that children are especially prone to *informational* masking, i.e., masking that goes beyond energetic masking predicted by filter models of the auditory periphery.

Studies identified a range of linguistic and cognitive factors to be responsible for children's difficulties with speech perception in noise: concerning the former, children are less able than adults to use stored phonological knowledge to reconstruct degraded speech input. This holds for the level of individual phonemes, as children's phoneme categories are less well specified than adults' (Hazan and Barrett, 2000), but also for the lexical level since children's phonological word representations are more holistic and less segmented into phoneme units. Therefore the probability of successfully matching incomplete speech input with stored long-term representations is reduced (Nittrouer, 1996; Metsala, 1997; Mayo et al., 2003). In addition, young children are less able than older children and adults to make use of contextual cues to reconstruct noise-masked words presented in sentential context (Elliott, 1979). Concerning attention, children's immature auditory selective attention skills contribute to their difficulties with speech-in-noise perception. Children's susceptibility to informational masking has been attributed to deficits in focusing attention on auditory channels centered on signal frequencies, while ignoring nonsignal channels (Wightman and Kistler, 2005). Behavioral and ERP measures from dichotic listening paradigms provide evidence that auditory selective attention improves throughout entire childhood (Doyle, 1973; Pearson and Lane, 1991; Coch et al., 2005; Wightman et al., 2010; Gomes et al., 2012).

Owing to the mediating role of linguistic competence and selective attention, children with language or attention disorders are still more impaired than normally developing children by noise in speech perception tasks (Geffner et al., 1996; Ziegler et al., 2005, 2009). A stronger noise effect is also evident for children tested in their second language when compared to native children (Crandell and Smaldino,



# Autism & Anxiety: Parents seek help for extreme reaction to loud noise

September 5, 2018

*Our 12-year-old son has autism, mild intellectual disability and anxiety attacks so severe that we end up in the emergency room. Loud noises are the worst – for example the school fire alarm, thunderstorms, a balloon popping, fireworks. Any help would be greatly appreciated.*



*This week's "Got Questions?" answer is by Judy Reaven, a clinical psychologist and associate professor of psychiatry and pediatrics at the University of Colorado School of Medicine and Children's Hospital Colorado, in Denver. Dr. Reaven's conducted research on the effectiveness of cognitive-behavioral therapy for anxiety in adolescents with autism, with the support of an [Autism Speaks research grant](#).*

***Editor's note: The following information is not meant to diagnose or treat and should not take the place of personal consultation, as appropriate, with a qualified healthcare professional and/or behavioral therapist.***

Thanks for the great question. It certainly sounds like your family is experiencing a very difficult situation. Anxiety symptoms and reactions are very common in individuals with autism spectrum disorder (ASD). They can interfere with functioning across home, community and school settings.

Although your son's reaction sounds more severe than most, many people with autism struggle with a range of fears, phobias and worries. These can range from a debilitating fear of, say, spiders or the dark to chronic anxiety about making mistakes or being late.

Fortunately, recent research suggests that anxiety in children and adults who have autism is quite treatable. Often, these individuals are helped by the same or similar strategies that work well in treating anxiety in the general population.

These approaches include cognitive behavior therapy, or CBT. Cognitive-behavioral approaches are well-established, evidenced-based treatments that have become the gold standard of psychosocial treatments for anxiety. [My own research](#) and that of my colleagues has demonstrated the helpfulness of modifying cognitive-behavioral approaches to address the special needs of those who have autism.

Where to begin?

You describe a number of fears that may be related to sensory sensitivities. I recommend that you begin by consulting an occupational therapist who can assess whether your son's extreme sensitivities to noises are part of a broader sensory processing disorder. If this is the case, and if your son's fears are exclusively triggered by sensory stimuli, then his symptoms may be best addressed by a sensory-focused intervention. Many occupational therapists who specialize in autism receive special training in this area.

It's common for children with ASD and anxiety to become extremely frightened in response to sensory stimuli. Perhaps – like many individuals with autism – your son also has difficulty telling you what's scaring him. Instead, he may show his fear with extreme avoidance of a situation.

For example, he might refuse to go to school after a fire drill. He might become fearful of birthday parties after being frightened by a balloon that popped unexpectedly. Other signs of extreme distress can include yelling, crying, clinging and general agitation. Because your son may have difficulty communicating, it's important to observe his behavior for these signs of distress. This can help you determine what's triggering his fears.

#### Avoidance versus learning to cope

Many parents go to great pains to protect their children by avoiding agitating situations. This approach is sometimes appropriate and even necessary. However, it denies individuals the opportunity to learn how to manage anxiety-provoking situations on their own.

By helping your son learn to manage his fear, you can prepare him for an unpredictable world so that he can participate in it to the maximum extent possible.

Given the severity of your son's anxiety symptoms, I suggest that you seek professional support in addition to the strategies offered here. Families whose children have milder symptoms of anxiety can try these strategies on their own – seeking professional help if symptoms worsen.

#### Tackling one fear at a time

I suggest making a list of your child's major fears and worries. Try to rank order them from mild to severe. To encourage success, I'd start with a mild-to-moderate fear before taking on his extreme reaction to loud noises.

Key components of a cognitive behavioral approach include introducing coping strategies such as deep breathing and "helpful thoughts" that can help a person manage fearful reactions.

For example, you can teach your son to take deep slow breaths to help manage his body's physical anxiety reactions.

"Helpful thoughts" are statements that your son can say to himself when faced with a situation that makes him anxious. For example, you can coach to your son to say, "This is a loud noise. I don't like it, but I can handle it."

To help your son to learn these strategies, I suggest you model taking deep breaths while repeating a "helpful thought" out loud.

#### Graded exposure

The most important step is to help your son face his fears a little at a time. We call this "graded exposure." For example, explain to your son that the two of you are going to listen to a recording of thunder. The first time, you might play the recording at a soft volume, then gradually increase the volume over time as he demonstrates increased comfort with the sounds.

Or you might try watching a video of a balloon pop – perhaps with the volume off the first time. Then he can watch a real balloon pop while standing some distance away. Over time, he can move closer and closer to the balloon.

After such exercises, you can present him with small rewards for being brave and "facing fears." Remember that even a small act of bravery – such as listening to a recording of thunder for 10 seconds – represents an important step toward handling fears. It deserves to be acknowledged.

Although graded exposure may seem counterintuitive, research indicates that this strategy is the single most effective strategy for getting over a particular fear.

I wish you and your son the very best. Please let us know how you're doing with an email to [GotQuestions@autismspeaks.org](mailto:GotQuestions@autismspeaks.org).

60  
Shares

## Additional Resources & Tools

#### EXPERT OPINION

[Help for Child with Autism & Recurring Behavioral Crises: Part 2](#)

#### EXPERT OPINION

[Parents Seek Help for Son with Autism and Recurring Behavioral Crises](#)




SCIENCE  
NEWS


#### EXPERT OPINION


[Parents Seek Help: Child with Severe Autism Eats Only Sweets](#)





I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

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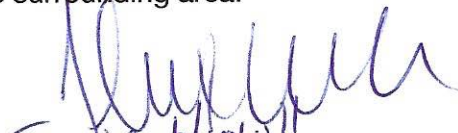
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ENERGY FACILITY SITING COUNCIL (EFSC)

Date: 6/20/9 Location: Armer, La Grande  
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I represent (if applicable)

I work for OHU School of Nursing & Grande  
Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is:

siltanenc@ohu.edu

☐ I wish to address the Energy Facility Siting Council and/or

☒ I wish to submit the following written comment:

My primary concern is fire. Of course visual impact  
is noted, but more than the sight of power is the  
memory of the sight of those fleeing the Pacific  
fire in California. I can not even bring myself to  
really think of the terror experienced by the people  
fleeing the fire, those trapped witnessing their  
children perished by the flames. How dare  
someone/company put my/our children at such horrific

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

risk. There are alternatives. I believe this selfish  
endeavor is nothing short of evil. Diana Siltanen

## How to Testify at Energy Facility Siting Council Meetings and Public Hearings:

State your name and address for the record and indicate whether you are speaking for yourself or for a group.

Keep your statement concise. Often the Council will inform the public how much time can be given to each person testifying.

Begin your statement by stating whether you support or oppose the particular agenda item and why. Describe how the issue(s) affects you or your group and feel free to suggest a solution. If you are opposing the agenda item, discuss how you see the proposal as inconsistent with existing laws, rules or ordinances.

It may help to prepare an outline of your testimony to use while speaking. If you wish, you can leave this testimony with the Council.

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\*See reverse for tips on giving testimony

## ENERGY FACILITY SITING COUNCIL (EFSC)

Date: 6/20/19 Location: La Grande OR  
REGISTRATION FOR PUBLIC COMMENT

Name: Randy Siltanen

Address: 1801 Foley St La Grande OR 97850

I represent (if applicable) \_\_\_\_\_  
Print your name OR your organization/business name.

☒ Send me future notifications about Council meetings via email.

My email address is: \_\_\_\_\_

☒ I wish to address the Energy Facility Siting Council and/or

☒ I wish to submit the following written comment:

- Is there just cause to build these power transmission lines?

The answer is no!

- The downsides are well documented: wildfire risk, watershed issues, disruption of ecosystems, deforestation (with attendant ↓ in CO<sub>2</sub> sequestration).

- For what just cause? Are there no other alternatives?

There are is no just cause because there are many alternatives! Solar

& wind energy options have achieved grid parity & are getting cheaper. If

there was no other way to provide necessary electricity to a hospital it would

PLEASE NOTE: If there are a large number of speakers, it may be necessary to limit the amount of time each speaker is allowed.

be understandable. But there are options available, and the electricity is often  
used for air-conditioning & powering big screen TV's. <sup>providing</sup> Cheap electricity to an  
affluent area is not just cause to introduce so many problems.

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It may help to prepare an outline of your testimony to use while speaking. If you wish, you can leave this testimony with the Council.



<p style="text-align: right;">Page 150</p> <p>1 Idaho Power, same address. So hopefully together we can 2 help answer your questions. 3 MR. MARK STOKES: After listening to all of 4 the comments tonight, we thought there were just a 5 couple of things that we wanted to get corrected on the 6 record. 7 First off, some previous testimony that was 8 presented tonight a statement was made that BPA is not a 9 partner in the project any longer. That is not true. 10 They are still a fully committed partner. In fact, I 11 was in communication with my counterparts at BPA earlier 12 this week before I left town. So I just want to get 13 that on the record. 14 One other item here, a few speakers ago made 15 the statement that Idaho Power does not have any 16 customers in Oregon. And that is not true as well. We 17 serve approximately 15 percent of our total system load 18 is for Oregon customers that are located in Malheur and 19 Baker Counties. So we do have a fairly substantial 20 number of customers in Oregon. 21 So with that, as we have done previous nights, 22 David and I would like to make ourselves available to 23 try and field any questions that Council members may 24 have. 25 VICE CHAIRMAN JENKINS: So Mark and David, I'm</p>	<p style="text-align: right;">Page 152</p> <p>1 HEARING OFFICER WEBSTER: Last call for 2 anybody to give any statements? 3 MR. RANDY SILTANEN: Thank you for letting me 4 speak. My name is Randy Siltanen. My address is 1901 5 Foley Street. 6 So I guess my major question to Idaho Power 7 is: For what just cause? So why are we doing this? If 8 there were no other options it would be understandable, 9 but there are plenty of other options. And we have 10 heard tonight dozens of reasons why this is a bad idea, 11 and we haven't heard any reason why this is a good idea. 12 And what it comes down to, to me, I think, is 13 money. And they think that it will be cheaper in the 14 long run to do this rather than use other new 15 technologies. 16 And Mr. Cimon spoke very eloquently about 17 this, that it's yesterday's news. We have got new 18 options. We have solar and we have wind. And there is 19 a very smart engineer by the name of Mark Jacobson at 20 Stanford who has outlined a really good road map for 21 renewable energy by the year 2030. And it doesn't 22 really make any sense to do this if money is the only 23 reason. 24 I think that's what it is, and I think they 25 are wrong on that. At this point they think it's</p>
<p style="text-align: right;">Page 151</p> <p>1 going to ask a really hard question tonight: Why wasn't 2 the BLM route proposed as a part of your application to 3 EFSC? 4 MR. MARK STOKES: Back when BLM was working on 5 getting their ROD issue, the delays in their process 6 happened, occurred. We had to move ahead with the state 7 process late in the application. And by the time BLM 8 came out with their ROD, their record of decision, it 9 was too late for us to really go back at that point. 10 Now, when I had conversations with BLM's 11 program manager about this and whether that created any 12 issues for BLM, they recognized that the Glass Hill 13 route that you're talking about and the Morgan Lake 14 route were identical on parcels that were under control 15 of BLM, federal government. 16 So the fact that in our state application we 17 had the Morgan Lake route did not influence or impact 18 BLM's record of decision in their process. 19 VICE CHAIRMAN JENKINS: Thank you. 20 HEARING OFFICER WEBSTER: Any further 21 questions? 22 CHAIRMAN BEYELER: Not from me tonight. 23 HEARING OFFICER WEBSTER: Thank you, 24 gentlemen. 25 MR. MARK STOKES: Thank you very much.</p>	<p style="text-align: right;">Page 153</p> <p>1 cheaper, but as Mr. Cimon outlined, it's not. In the 2 long run, it's not cheaper. And there is no just cause 3 to do this. It's not like there is -- it's not like we 4 are trying to provide water to an impoverished area. 5 It's not like bringing electricity to a third-world 6 country who needs it to run their hospital. 7 There is plenty of electricity, there is 8 plenty of ways to get it, and it's not absolutely 9 essential that it goes that way. And yet you are asking 10 people to give up their viewshed. You are putting 11 people's lives at risk for something that is not 12 necessary, other than that it's cheaper, and it seems 13 cheaper, and in the long run it's not cheaper. And that 14 is all I have to say. 15 Thank you. 16 HEARING OFFICER WEBSTER: Thank you. 17 We have run an hour past our allotted time. 18 So anybody -- do you want 2 more minutes, Ms. Barry? 19 MS. LOIS BARRY: This will be very short. But 20 since you have all been so patient and listened for so 21 long and you have heard a lot of important information, 22 one is, from my research, that every single planned 23 transmission line that has been canceled was considered 24 essential until the day it was canceled. 25 But now I think you deserve a laugh. I want</p>

## **TARDAEWETHER Kellen \* ODOE**

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**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:53 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.38.19.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter signed by me and 54 other residents of La Grande expressing our concerns regarding the B2H Project and we request that EFSC deny the Site Certificate.

I have also sent a bound copy of this material by the US Postal Service.

Sincerely,

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850



August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the usage of the "Local Streets" <sup>1</sup> specifically the Modelaire-Hawthorne Loop) <sup>2</sup>, hereafter referred to as the "loop", of La Grande to access the site entrance. This residential "loop" was constructed without sidewalks for a new development around the early 1960s.

According to OAR 345-022-0110, Public Services (pg. 5. April 2017) "The applicant...must address all permanent and temporary impacts of the facility on housing, traffic, safety, police and fire protection, health care and schools." <sup>3</sup>

My impression from reviewing the application Page 17 <sup>4</sup> is that the applicant has not fully examined the final portion of the intended route nor does it fully recognize or address the need for traffic mitigation. This "loop" is the only access to/from thirty-six houses to the rest of the city. The area to the north of the "loop" is occupied by the Grande Ronde Hospital and Medical Clinic. Two blocks to the east is located the local high school and a grade school. <sup>2</sup>

In June of 2016, the Grande Ronde Hospital petitioned the City to have a conditional use for a parking lot expansion project next to Hawthorne. The Conditional Use Permit was approved subject to the Condition of Approval that "No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to residential standards and is not designed to support commercial traffic." <sup>5</sup>

The La Grande Director of Public Works, Kyle Carpenter, provided information regarding the widths for the streets in question. The two streets range from 33 feet to 37 feet in width with no sidewalks. I personally measured the area where the unpaved stem of Hawthorne leaves the "loop" to go up the hill. At the junction it measures 32 feet curb cut to curb cut and narrows to 18-21 feet in width as it goes around the corner up the hill. 6 The Public Works Director also provided pictures of the mapping system showing the existing utilities located in the "loop". 7-8. It should also be noted that from the entrance to the "loop" at Sunset Drive to the entrance of the site the road has a 16% grade.

Attachment U2 9 from the application shows an "Aerial Lift Crane to be Used During Construction" and the Transportation and Traffic Plan on page 19 10 lists a number of other vehicles anticipated to be used. Article 6.6 — Public Street Standards for the City of La Grande Section 6.6.002 states that "Collector Streets are designed to withstand normal trucks of an HS20 loading. Larger trucks are to utilize Arterial Streets where at all possible." 11 The majority of vehicles listed on page 19 exceed that limit and would be using a Local Street in addition to Arterial and Collector Streets. According to the Public Works Director the two streets in the "loop" were designed as Local Streets for residential use, able to accept the pressures of HS20 for the purpose of an occasional need such as a weekly garbage truck or an emergency vehicle but for no more than 5% of the time. The paving construction of these over 50 year old streets in the "loop" was not designed for repetitive use by vehicles heavier than a normal car. These streets in the "loop" have not been repaved, only patched when necessary, since they were first constructed.

The application does not address the "loop" specifically, but 3.1.2 (pg. 19) 10 and Table 6 (pg.17) 12 of the Transportation and Traffic Plan indicate there would be numerous vehicles using this route. Not knowing exactly just which vehicles would be on the "loop" daily but making a conservative estimate of 50 round trips (100 single) it would be a constant parade with one truck every 7.2 minutes. This is unacceptable for numerous reasons including constant excessive noise.

Not only would weight of the vehicles be a problem but the narrowness of the "loop" streets and the ninety degree blind curves that would have to be executed would be either impossible or extremely dangerous considering the turning radius for many of these large vehicles. The



already dangerous situation for a number of driveways that exit onto these "loop" streets at blind curves would be exacerbated. 13-14

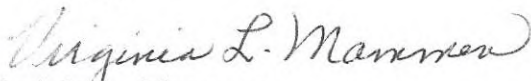
When considering only the traffic and safety issues listed above, the use of the "loop" as a part of the route for Idaho Power seems to be not only dangerous for the residents but unconscionable and irresponsible for Idaho Power to use such streets that are currently primarily for the neighborhood for walking (children to school, all ages for physical training), driving, or biking. I fear there are standards that are either not being considered or they are intentionally being ignored. There should be some common sense, courtesy and respect for the impact this project would impose on any neighborhood.

Finally, La Grande Ordinance Number 3077, which adopted Oregon State Traffic Laws by reference, states in Section 17 page 8 "It shall be unlawful for any person, firm or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes." Neither Modelaire/Hawthorne Loop nor Sunset Drive are posted as truck routes. 15-16

A site review and traffic plan must be completed prior to the cite certificate being issued and not 90 days prior to construction as stated.

For the above reasons I oppose the usage of the proposed route for the construction of the B2H transmission line.

Sincerely,

  
Virginia L. Mammen  
405 Balsa  
La Grande, Oregon. 97850

gmammen@eoni.com

**TABLE 1  
 STREET STANDARDS**

Functional Classification	ADT Volume	Speed (mph)	# of Travel Lanes	Travel Lane Width	Turn Lane or Median Width	Bike Lanes	Min. Bike Lane Width	On-Street parking
Downtown Arterial	10,000	20	2-3	11'	11'			both sides
Arterial	10,000	40-55	2-5	12'	4-14'	optional <sup>4</sup>	5'	none
Major Collector	2,000 - 10,000	25-45	2-3	11'	12'	required	5'	one or both sides
Minor Collector	1,000 - 2,000	25-35	2	11'	none	Optional <sup>5</sup>	5'	one or both sides
Local Street	0 - 1,000	15-25	2	10'	none	none	none	one or both sides

Functional Classification	Sidewalks	Min. Sidewalk Width	Planting Strip Width <sup>1</sup>	Total Paved Width <sup>2</sup>	Total ROW Width <sup>3</sup>	Private Access Spacing
Downtown Arterial	required	12'	3'6" <sup>6</sup>	49'	80'	200'
Arterial	required	5'	8'	36'-72'	80'-102'	200' - 400'
Major Collector	required	5'	8'	52'-60'	62'-90'	150' - 300'
Minor Collector	required	5'	8'	30'-48'	60'-78'	75' - 150'
Local Street	required	5'	8'	28'-36'	40'-66'	Each Lot

<sup>1</sup>A portion of the required planting strip width may be used instead as additional sidewalk width or reduced right of way, as appropriate.

<sup>2</sup>The minimum of the paved width was calculated with the following assumptions:

Arterials: Two (2) travel lanes, four foot (4') median divider, no center turn lane, no bike lanes.

Major Collectors: Two (2) travel lanes, two (2) bike lanes, no center turn lane, parking on one (1) side.

Minor Collectors: Two (2) travel lanes, parking on one (1) side of street, no bike lanes.

Local Streets: Two (2) travel lanes, parking on one (1) side of street.

The maximum paved width for each street was calculated assuming the inclusion of all required and optional facilities. Minimum paved widths for each street are as required in Section 6.2.005 of this Code.

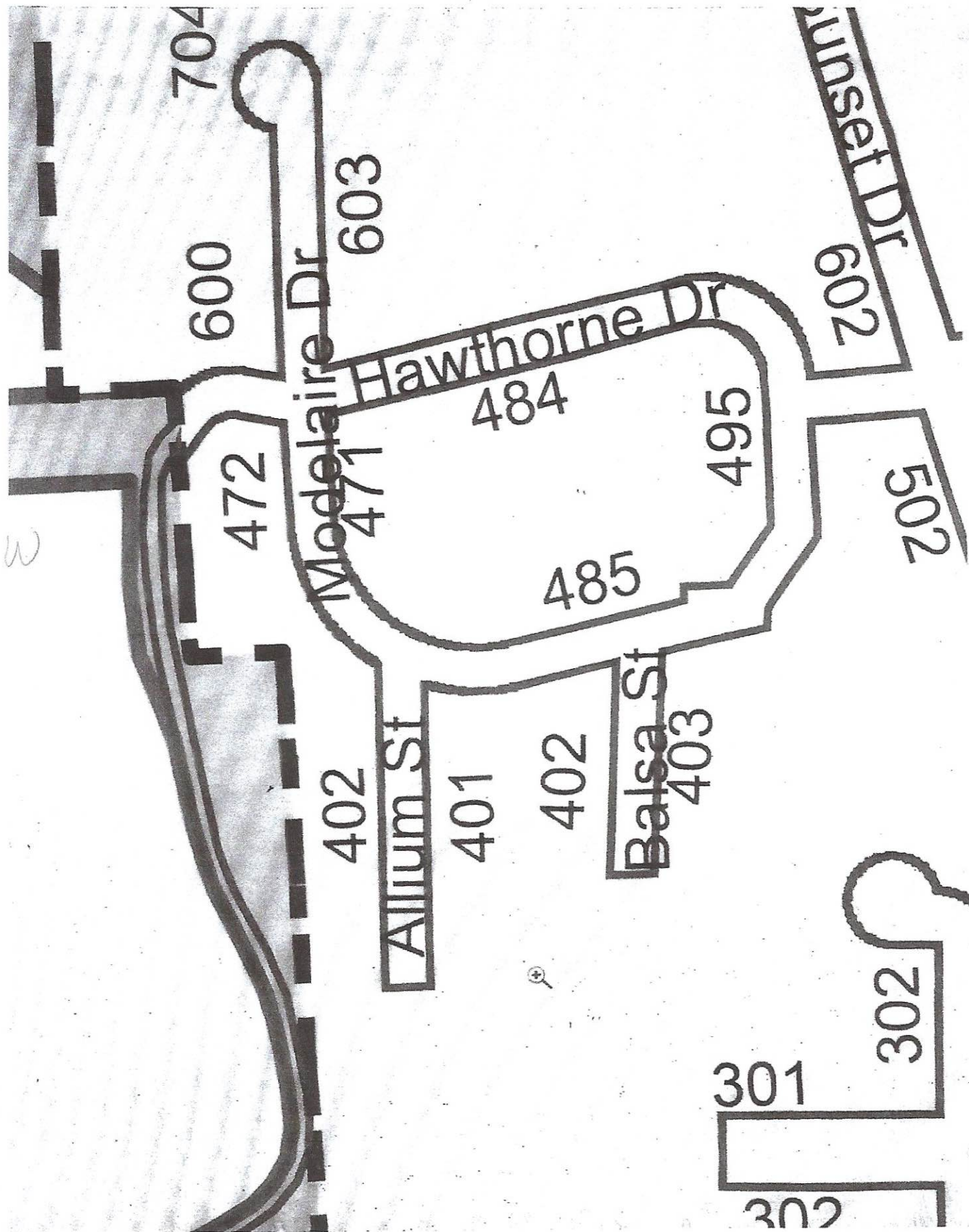
<sup>3</sup>These right-of-way width ranges are for new streets.

<sup>4</sup>Bike lanes should be provided on Arterials unless more desirable parallel facilities are designated and designed to accommodate bicycles.

<sup>5</sup> Bike lanes should be provided on Minor Collectors where traffic volumes or other factors warrant. Otherwise, Minor Collectors should be designed and designated as shared roadway facilities with wide outside travel lanes of 14' on important bike routes.



N



5



## Public Services

### OAR 345-022-0110

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## Waste Minimization

### OAR 345-022-0120

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## Need for a Facility

### OAR 345-023-0005

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## Specific Standards for Wind Facilities

### OAR 345-024-0010 and 345-024-0015

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## Specific Standards for Transmission Lines

### OAR 345-024-0090

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





Idaho Power Responses to Comments and Requests for Additional Information on the B2H APASC  
from the City of La Grande  
Compiled by ODOE. RAI's from the City of La Grande and Responses from IPC

U	U- Public Services include utilities such as road systems, water, sanitation services, power, and other amenities necessary for the construction.	Ordinance #2912, Series 1997 gives the City jurisdiction and control on all City street rights-of-way and Ordinance #3077, Series 2009, establishes the process and requirements for permits and licenses for uses of the streets that are not normal uses and may result in damages.	proposed helipad is a necessary supporting facility.	<p>The project construction has two major road systems through La Grande that are proposed for this project – Morgan Lake Road via Gekeler Lane, 'C' Avenue, Walnut Street, and on up Morgan Lake Road. Roads along these routes are used by the ambulance service for accessing the hospital, the public transit system on its normal daily route, citizens to access locations within and outside this area and also for the school bus system for transporting kids to the La Grande Middle School, La Grande High School and Central Elementary School. In addition to the vehicular modes of travel, those routes are heavily used by bicyclists and pedestrians. The other route that would be utilized is the same route with the exception of turning onto Sunset Drive and up Hawthorne Street to a private gravel road that heads up the area above Deal Canyon. Two other routes that are not addressed but that would be obvious access routes for construction would be South 12th Street and South 20th Street. As a general rule, City streets are built with ninety degree angles, which may restrict some</p> <p>To address the City's concerns regarding traffic and road use within the city's limits, Idaho Power has added the following proposed conditions to Exhibit K:</p> <p><u>Land Use Condition 9: Prior to construction in Union County, the site certificate holder shall complete the following to address traffic impacts in the county:</u></p> <p><u>a. The site certificate holder shall finalize, and submit to the department for its approval, a final county-specific transportation and traffic plan. The protective measures described in the draft Transportation and Traffic Plan in ASC Exhibit U, Attachment U-2, shall be included and implemented as part of the final county-specific plan, unless otherwise approved by the department;</u></p> <p><u>b. The site certificate holder shall work with the Union County Road Department and the City of La Grande Public Works Department to identify concerns related to Project construction traffic; and</u></p> <p><u>c. The site certificate holder shall develop traffic control measures to mitigate the effects of Project construction traffic;</u></p> <p><u>Land Use Condition 26: During construction in Union County, the site certificate holder shall conduct all work in compliance with the Union County-specific</u></p>
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#### IV. CONCLUSIONS

Based on the Findings of Fact above, the Planning Commission concludes that the application meets the requirements established in LDC Articles 8.5 and other applicable codes and Ordinances.

#### V. ORDER AND CONDITIONS OF APPROVAL

Based on the conclusions above, the Planning Commission approves the Conditional Use Permit as requested, subject to the following Conditions of Approval:

1. No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to a residential standards and is not designed to support commercial traffic.
2. Any existing driveway curb cuts along Hawthorn Drive bordering GRH's property, that are not used for residential purposes, shall be removed and replaced with City standard improvements that exists adjacent to such areas.
3. There is a storm sewer line extending through the project area that shall to be protected. Any improvements that may affect the storm sewer line shall be reviewed and approved by the Public Works Director.

#### VI. STANDARD CONDITIONS OF APPROVAL FOR LAND USE APPLICATIONS

1. **Revisions to a Valid Conditional Use Permit:** Any variations, alterations, or changes in a valid Conditional Use Permit requested by the deed holder shall be considered in accordance with the procedures of the Land Development Code as though a new Conditional Use Permit were being applied for.
2. **Public Works Standards:** Where a development involves work within the public right-of-way, a Right-of-Way Permit shall be obtained from the Public Works Department in advance of commencing with any work in the right-of-way. All improvements within the public right-of-way shall be in conformance with the most recent adopted City of La Grande *"Engineering Standard Drawings and Specifications for Construction Manual."*
3. **Building Permits:** The City of La Grande Building Department shall be contacted early in the process and in advance of development to coordinate and obtain required building, plumbing, electrical and/or mechanical permits. All required permits shall be acquired in advance of construction.

#### VI. OTHER PERMITS AND RESTRICTIONS

The applicant and property owner is herein advised that the use of the property involved in this application may require additional permits from the City of La Grande or other local, State or Federal Agencies.

The City of La Grande land use review, approval process and any decision issued does not take the place of, or relieve the applicant of responsibility for acquiring such other permits, or satisfy any restrictions or conditions thereon. The land use decision herein does not remove, alter, or impair in any way the covenants or restrictions imposed on this property by deed or other instrument.

The land use approvals granted by this decision shall be effective only when the rights granted herein have been exercised and commenced within one (1) year of the effective date of the decision. In case such right has not been exercised and commenced or an extension obtained, the approvals granted by this decision shall become null and void. A written request for an extension of time shall be filed with the Planning Department at least thirty (30) days prior to the expiration date of the approval.





Virginia Mammen &lt;4gmammen@gmail.com&gt;

**Modelaire Roadway Specifications**

3 messages

**Kyle Carpenter** <KCarpenter@cityoflagrande.org>  
To: "gmammen@eoni.com" <gmammen@eoni.com>

Fri, Jul 12, 2019 at 1:51 PM

I have attached a couple pictures of our mapping system that will give you a sense of where existing utilities are in Modelaire and Hawthorne. As for the widths of the roadways, I took measurements in multiple places, and found the following:

- Modelaire Drive (F Avenue) between Sunset Blvd and Hawthorne Drive is approximately 33 feet wide with a grade of about 5 Percent.
- Hawthorne Drive is approximately 32 feet wide at the bottom near the intersection of Modelaire/F Avenue and widens to about 34 feet where it intersects Modelaire at the top of the hill. The grade heading up hill is approximately 15.5 Percent.
- Modelaire Drive is generally 36 feet wide with some minor variability generally less than a foot (35' to 37'). On the southernmost segment of the roadway where the majority of the elevation gain is observed the grade is approximately 16 Percent.

Let me know if there are any other specifications of these roadways that you are interested in that I have missed. Have a great weekend and thanks for the treats, the guys were very appreciative.

*Kyle Carpenter, PE*

**Public Works Director**

**City of La Grande**

**Public Works**

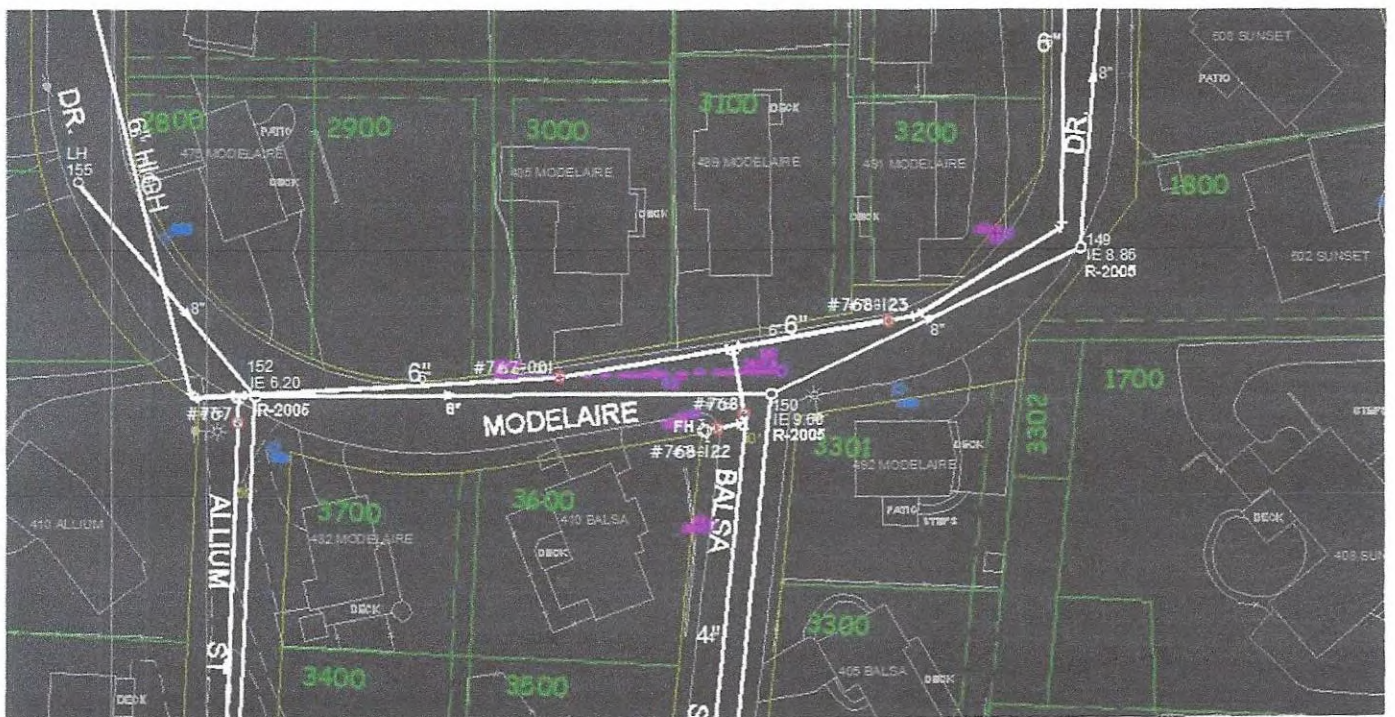
Ph: (541) 962-1325

Fax: (541) 963-4844

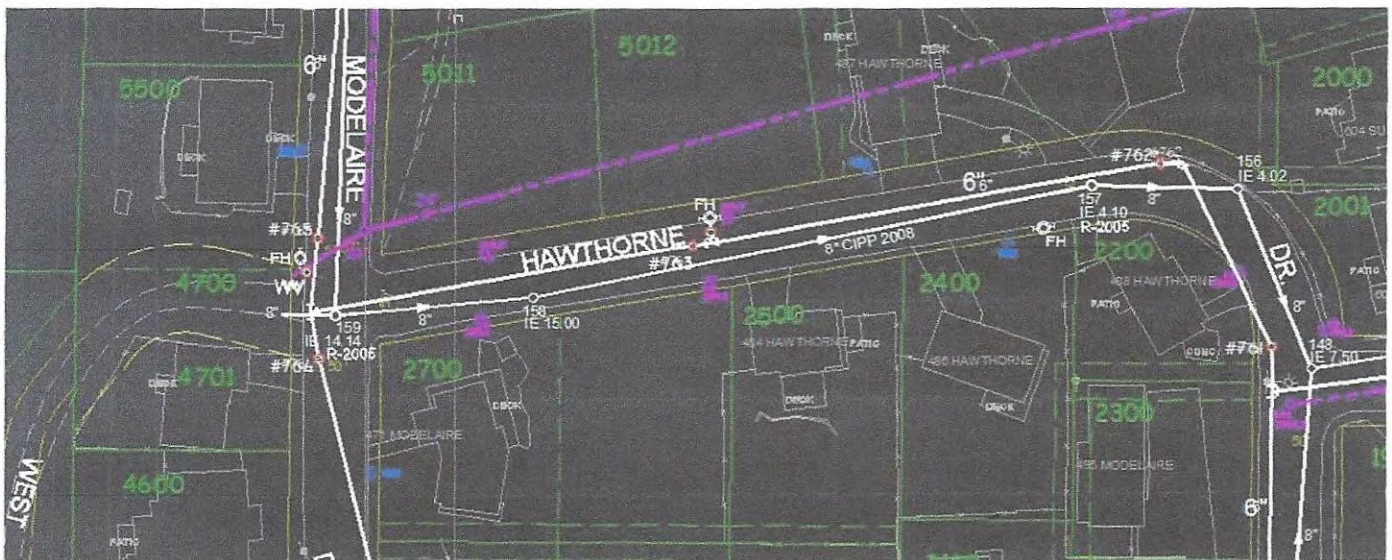
**2 attachments**

**Hawthorne.jpg**  
150K

**Modelaire.jpg**  
120K







attachment U2

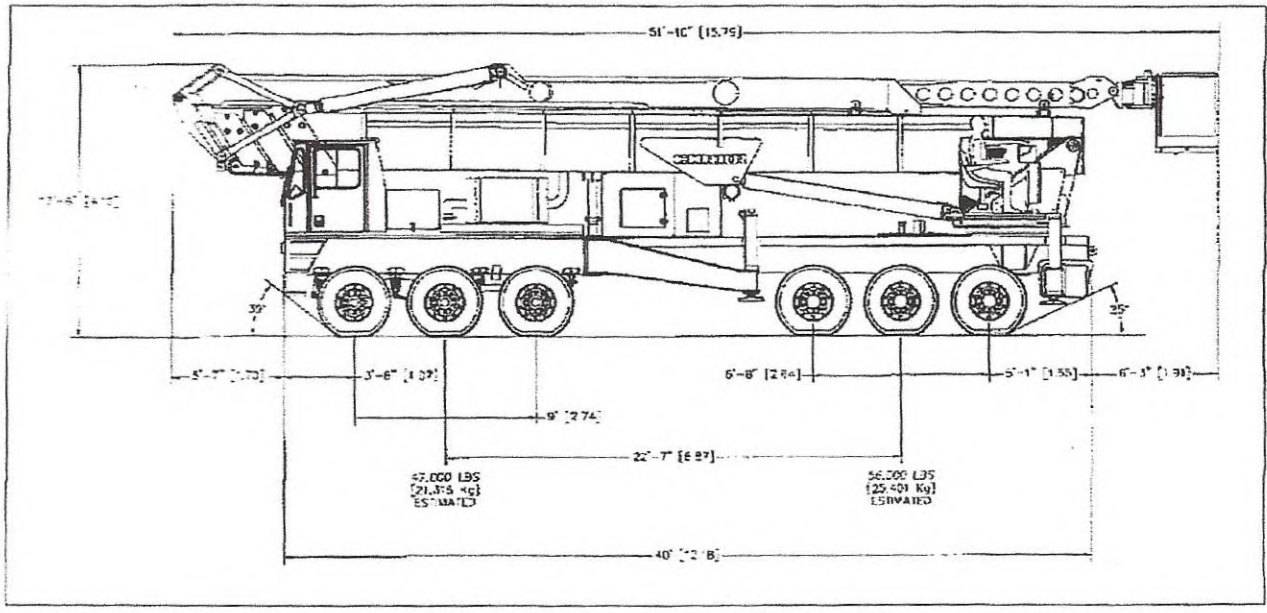


Figure 2. Example Aerial Lift Crane to be Used During Construction (Roadable Length 52 Feet; Width 8 Feet 6 Inches)



The following is a summary of anticipated equipment to be used for each transmission-line construction activity.

- Survey work: pickup trucks or ATVs.
- Timber removal: pickup trucks, feller bunchers, dump trucks, wood chippers.
- Road construction: pickup trucks, bulldozers, motor graders, and water trucks.
- Hole digging, installation of directly embedded structures, or foundation installation: pickup trucks, 2-ton trucks, digger derrick trucks, hole diggers, bulldozers, concrete trucks, water trucks, cranes, hydro cranes, wagon rock drills, dump trucks, and front-end loaders.
- Hauling lattice steel members, tubular poles, braces, and hardware to the structure sites: steel haul trucks, carry alls, cranes, and forklifts.
- Assembly and erection of structures: pickup trucks, 2-ton trucks, carry alls, cranes, and a heavy lift helicopter.
- Wire installation: pickups, wire reel trailers, diesel tractors, cranes, 5-ton boom trucks, splicing trucks, three drum pullers, single drum pullers, tensioner, sagging dozers, carry-alls, static wire reel trailers, bucket trucks, and a light duty helicopter.
- Final cleanup, reclamation, and restoration: pickup trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, hydro-seed truck, and water trucks.

The highest level of traffic will be when the wire stringing operations begin while several other operations are occurring at the same time, which will likely include ROW clearing, installing foundations, hauling steel, and assembling and erecting structures. For the station work, the highest level of traffic will be during site grading and foundation installation. For the communication station sites, the highest level of traffic will be during grading and site preparation.

Detailed estimates of trips generated by transporting Project construction equipment will be provided by the construction contractor prior to construction.

### **3.1.3 Traffic Related to Timber Removal**

In forested areas, the Project will require removal of timber from the Project ROW and for construction and improvement of access roads. Specific timber harvest plans have not been finalized. Logs from timber clearing may be transported to nearby sawmills. Decisions regarding transportation routes for harvested timber will be made following completion of a timber harvest plan, and the number of log truck trips will be estimated when the timber harvest plan has been finalized. Logging slash will remain onsite if possible. For additional discussion regarding removal of timber in forested areas, see Exhibit K, Attachment K-2, ROW Clearing Assessment.

### **3.1.4 Impacts to V/C Ratios**

Based on the estimated trip generation numbers in Tables 4 and 6, a maximum of approximately 1,294 daily one-way vehicle trips are expected within any one construction spread. To facilitate traffic and other analyses, the two construction spreads are divided into smaller sections based on similar construction windows and seasonal weather restrictions. Not all construction sections will have the same number of concurrent construction activities, depending on how the construction contractor sequences and executes the Project. Some sections will have fewer daily vehicle trips. For the purposes of the traffic analysis, the spreads are divided into five sections with multi-use areas that could have additive traffic impacts. The sections are assumed to have approximately equal levels of activity. The 1,294 daily one-way trips per spread divided over five sections of more concentrated traffic results in 259 daily one-

## **ARTICLE 6.6 – PUBLIC STREET STANDARDS**

### **SECTION 6.6.001 - PURPOSE**

Upon the request of the La Grande City Council, a variety of street design standards have been reviewed and are now incorporated in the Land Development Code.

### **SECTION 6.6.002 - CLASS I IMPROVEMENT STANDARDS**

This classification will cover those streets that are designed to meet the standards for an expected life of twenty (20) years or more. The attached drawings shall be the minimum standard for those streets in this classification. All streets designated as Federal Aid Urban Streets (F.A.U.) shall be constructed under these design standards. Streets in this designation shall be constructed with sidewalks when at all possible in an effort to increase pedestrian safety. Collector streets are designed to withstand normal trucks of an HS 20 loading. Larger trucks are to utilize Arterial streets where at all possible. This level of development shall be the ultimate goal for all streets within the City of La Grande.

Possible means of financing available for this Class shall be methods A, B, C, D, E, F, G, and H in Section 6.6.006.

#### **A. Advantages**

1. The construction life is extended to a period above other City standards.
2. The visible aesthetics in relationship to having curbs and a blacktop surface with landscaping or concrete driveways and a sidewalk is generally appealing to the public.
3. Easy maintenance for the Public Works Department for cleaning and minor repair.
4. Storm sewer drainage is confined within the bounds of the curbs during minor flooding periods.
5. Parking is restricted to a solid barrier, that being the curb; this restricts parking in the area on the back side of the curb and confines travel to the street surface.
6. Defined areas for possible cross walks, signs, power poles, and other utilities that are restricted to the outside areas behind the curbs.
7. It allows for a wide range of financing methods and is to City standards for a ten (10) year Bancroft bonding.
8. Provides a dust free surface.

#### **B. Disadvantages**

1. The extreme high level of cost that is incurred with this type of development.

### **SECTION 6.6.003 - CLASS II IMPROVEMENT LEVEL**

Streets constructed in this classification shall be constructed to the same standards as Class I Streets with the exception of the form of drainage system. These streets shall meet the standards as shown on the attached drawing. This level of construction shall be only utilized in substitution for Class I Streets when it is determined by the City Council at the recommendation of the City Engineer or Engineering Superintendent, that an adequate drainage system cannot be installed for a Class I Street.



Table 6. Construction Vehicle Trips per Day per Construction Spread

Construction Crew Type	Construction Vehicles					
	Light Construction Vehicles			Heavy Construction Vehicles		
	Number of Pickups/ Mechanic Trucks (per day)	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)	Number of Other Vehicles	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)
Substation Construction	20	2	40	5	2	10
ROW Clearing	9	4	36	5	4	20
Roads/ Pad Grading	9	4	36	9	2	18
Foundations	9	2	18	5	8	40
Tower Lacing (assembly)	27	2	54	0	0	0
Tower Setting (erection)	20	2	40	0	0	0
Wire Stringing	9	4	36	9	4	36
Restoration	3	2	6	0	0	0
Blasting	5	4	20	0	0	0
Material Delivery	20	8	160	12	2	24
Mechanic and Equipment Mgmt.	5	6	30	0	0	0
Refueling	0	0	0	5	4	20
Dust Control	0	0	0	5	4	20
Construction Inspection	5	8	40	0	0	0
Concrete Testing	5	4	20	0	0	0
Environmental Compliance	9	6	54	0	0	0
Surveyors	5	3	30	0	0	0
<b>Totals</b>	—	—	<b>620</b>	—	—	<b>188</b>

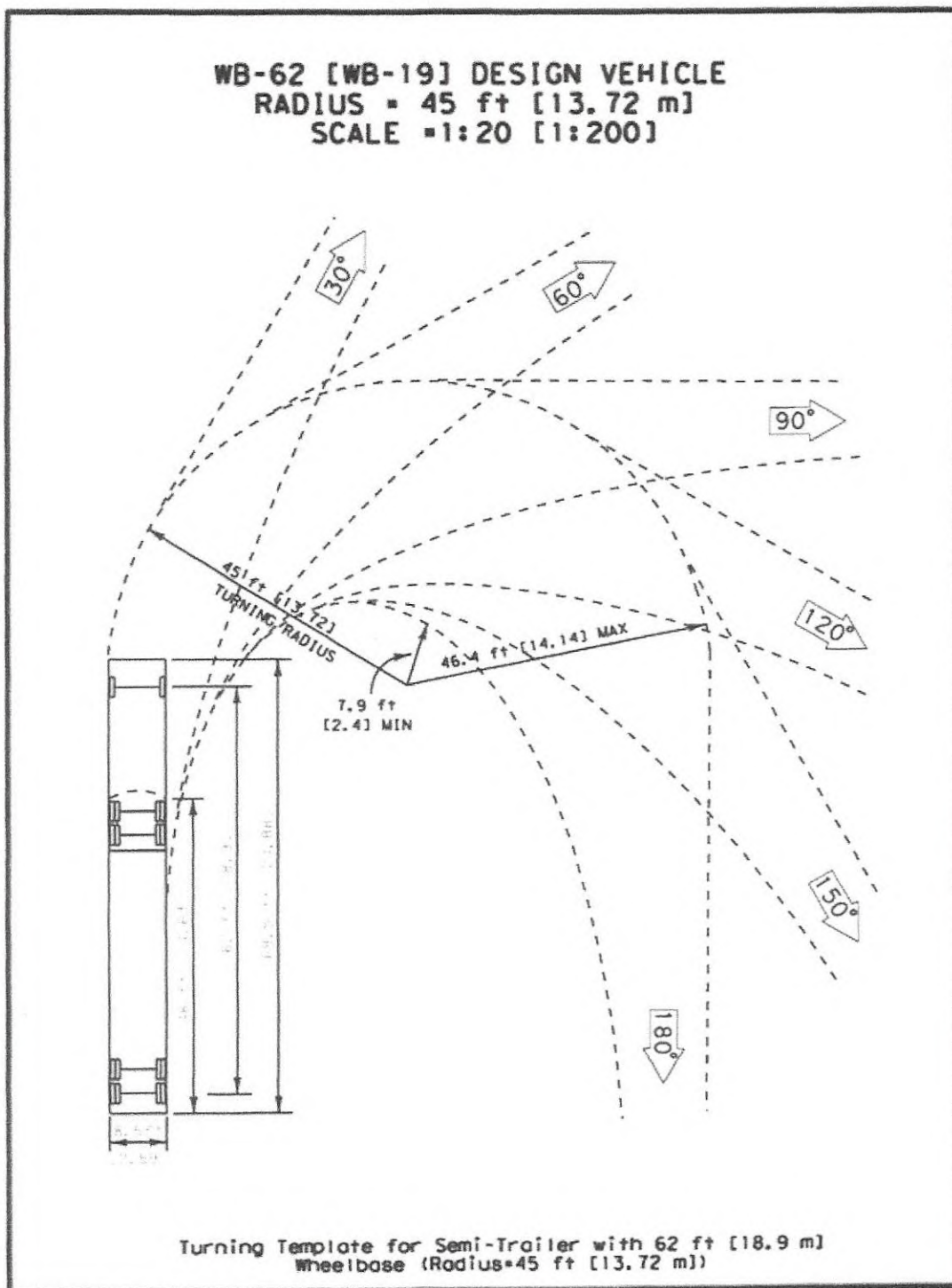
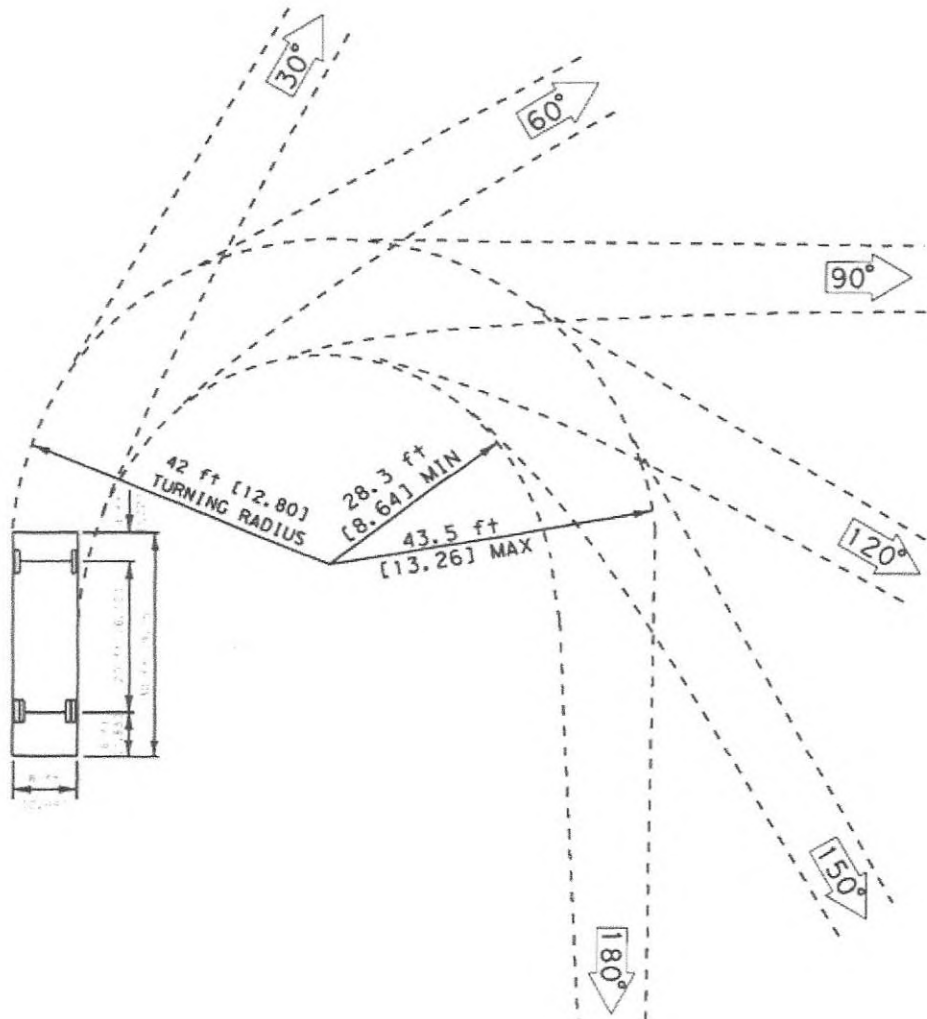


Figure 7-4. Turning Template for Semi-Trailer with 62 ft [18.9 m] Wheelbase, (not to scale). Click [here](#) to see a PDF of the image.



**SINGLE UNIT (SU) TRUCK DESIGN VEHICLE**  
**TURNING RADIUS = 42 ft [12.80 m]**  
**SCALE = 1:20 [1:200]**



Turning Template for Single Unit Trucks or Buses

Exhibit 15

**CITY OF LA GRANDE  
ORDINANCE NUMBER 3077  
SERIES 2009**

**AN ORDINANCE CONTROLLING VEHICULAR AND PEDESTRIAN TRAFFIC, PARADES  
AND PROCESSIONS AND ISSUANCE OF PERMITS; PROVIDING PENALTIES; AND  
REPEALING ORDINANCE NUMBER 2845, SERIES 1993; ALL AMENDING ORDINANCES  
AND ALL OTHER ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HERewith;  
AND DECLARING AN EFFECTIVE DATE**

THE CITY OF LA GRANDE ORDAINS AS FOLLOWS:

**Section 1.** This Ordinance may be cited as the City of La Grande Uniform Traffic Ordinance.

**Section 2.** APPLICABILITY OF STATE TRAFFIC LAWS.

Oregon Revised Statutes, Chapter 153, and the Oregon Vehicle Code, ORS Chapter 801 and 822, as now constituted, are adopted by reference. Violation of an adopted provision of those chapters is an offense against the City.

**Section 3.** DEFINITIONS

In addition to those definitions contained in the Oregon state Motor Vehicle Code, the following words or phrases, except where the context clearly indicates a different meaning, shall mean:

a. Alley

A street or highway primarily intended to provide access to the rear or side of lots or buildings in urban areas and not intended for through vehicular traffic.

b. Bicycle

A bicycle is a vehicle that:

1. Is designed to be operated on the ground on wheels;
2. has a seat or saddle for use of the rider;
3. is designed to travel with not more than three (3) wheels in contact with the ground;
4. is propelled exclusively by human power; and,
5. has every wheel more than fourteen inches (14") in diameter or two (2) tandem wheels, either of which is more than fourteen inches (14") in diameter.

c. Bicycle Lane

That part of the highway, adjacent to the roadway, designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

d. Bicycle Path

A public way, not part of a highway, which is designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

e. Block

The part of one side of a street lying between the two (2) nearest cross streets.

f. Central Business District



a. City Regulation of Special Movement of Oversized Load

The applicant shall submit an application to the City Manager or designee, showing the terminal points of the purported movement; the proposed route; the nature of the movement requested, including the weight and dimensions of the vehicle, load, machine, building, or structure to be moved; the time, date and duration of the proposed movement.

b. Special Movement Permit

A permit shall be required to move any vehicle, structure, or load on, or to access a street when, after preparation for movement, the vehicle, structure or load exceeds fourteen feet (14') in height, requires the use of guy wires, or could result in the blockage of a street. An approved application may serve as a permit, and a copy of the approved application shall be provided to the applicant.

**Section 17. TRUCK ROUTES**

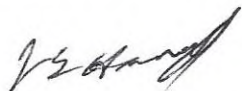
- a. It shall be unlawful for any person, firm, or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes.
- b. Any vehicle with a gross weight over 26,000, pounds specifically picking up deliveries or making deliveries to any business or residence located on a street that is not a truck route will be exempted if the vehicle is driven from the truck route to the destination in the shortest, most direct, and safest route.
- c. The use of Jacob brakes shall not be allowed within the city limits of La Grande, Oregon.
- d. Truck routes will be posted as follows:
  1. Walnut street north from the city limits to C Avenue;
  2. C Avenue east from Walnut Street to Gekeler Avenue;
  3. Gekeler Avenue east to the city limits;
  4. 12th street south from Gekeler Avenue to the city limits;
  5. 2nd Street south from the city limits to Adams Avenue;
  6. Monroe Avenue east from Spruce Street to Highway 82;
  7. Jackson Avenue east from Spruce Street, and
  8. Spruce Street south from the city limits to Monroe.

**Section 18. IMPOUNDMENT AND DETENTION OF VEHICLES**

- a. Whenever a vehicle is placed in a manner or location that constitutes an obstruction to traffic or a hazard to public safety, a police officer or enforcement officer shall order the owner or operator of the vehicle to remove said vehicle. If the vehicle is unattended, the officer or enforcement officer may cause the vehicle to be towed and stored at the owner's expense. The owner shall be liable for the costs of towing and storing, notwithstanding that the vehicle was parked by another or that the vehicle was initially parked in a safe manner but subsequently became an obstruction or hazard.

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE



PRINTED NAME James E. Howell II

ADDRESS 482 Modelaire Dr

EMAIL jhowell12@frontier.com

SIGNATURE



PRINTED NAME Jane Howell

ADDRESS 482 Modelaire DR

EMAIL d.janehowell@gmail.com

SIGNATURE

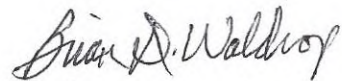


PRINTED NAME Lisa Waldrop

ADDRESS 475 Modelaire Dr.

EMAIL ldjw62@gmail.com

SIGNATURE

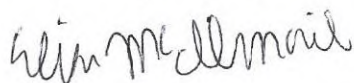


PRINTED NAME BRIAN D. WALDROP

ADDRESS 475 MODELAIRES DR.

EMAIL bdwaldrop58@gmail.com

SIGNATURE



PRINTED NAME EUSE MCILMAIL

ADDRESS 476 MODELAIRES DR.

EMAIL mcilmail154@hotmail.com




I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

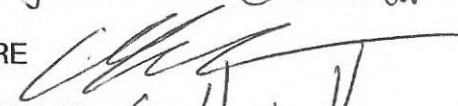
  
Jessie Huxell  
472 Modelaire Dr. LaGrande OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

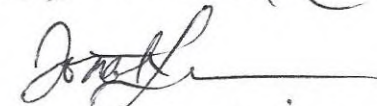
  
C. Huxell  
472 Modelaire Dr. LG, OR 97850  
CHRIS Huxell @ EMAIL. Com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Jonah Lindeman  
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jlindeman@rpi.ag

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

Marie Skinner  
Marie Skinner  
208 3rd LaGrande  
marieskinner@hotmail.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

Blake Bars  
Blake Bars  
1101 G Ave La Grande  
blakebars@gmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*D. Dale Mammen*

PRINTED NAME

D. Dale Mammen

ADDRESS

405 BRISA, La Grande, OR

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d.mammen@conl.com

SIGNATURE

*Jim Kreider*

PRINTED NAME

Jim Kreider

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*Judie Arritola*

PRINTED NAME

Judie Arritola

ADDRESS

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*Pasco Arritola*

PRINTED NAME

Pasco Arritola

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EMAIL

PJTOLA@CHARTER.NET

SIGNATURE

*John Barutz*

PRINTED NAME

John Barutz


ADDRESS


484 Hawthorne LG, OR 97850


EMAIL





I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE   
PRINTED NAME Andrea Gulzow  
ADDRESS 486 Hawthorne DR, LA Grande  
EMAIL foreverfamily33@aol.com

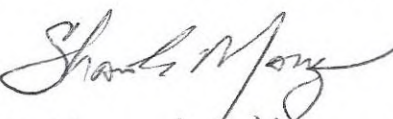
SIGNATURE   
PRINTED NAME Frances E. Lillard  
ADDRESS 471 Modelaire Dr. L.G.  
EMAIL

SIGNATURE   
PRINTED NAME Brent H. Smith  
ADDRESS 410 Allium St  
EMAIL smithbrent@gmail.com

SIGNATURE   
PRINTED NAME M. Jeannette Smith  
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EMAIL jeannetterampton@gmail.com

SIGNATURE   
PRINTED NAME KIMBERLEY HEITSTUMAN  
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EMAIL kimheitstuman@hotmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE: 

PRINTED NAME Shawn K. Mangum

ADDRESS 2905 E. M. Ave,

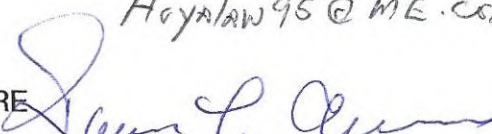
EMAIL Hoyanaw95@ME.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
CONNIE L. ALLEN 541-9637720  
410 BALSA STREET LAGRANDE, OREGON 97858  
N/A

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

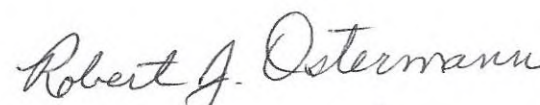
  
Linda Snyder  
491 Modelaire Dr

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
Robert J. Ostermann  
495 Modelaire Dr. La Grande, OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Robin J. Ostermann  
495 Modelaire Dr La Grande, OR 97850



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*Jonathan D. White*

PRINTED NAME

Jonathan D. White

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SIGNATURE

*Robin Stedfeld*

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Robin Stedfeld

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*Rita Allen*

PRINTED NAME

Rita Allen

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EMAIL

SIGNATURE

*Ruth Schumacher Yeates*

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Ruth Schumacher Yeates

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SIGNATURE

*John Yeates*

PRINTED NAME

JOHN YEATES

ADDRESS

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EMAIL

jyeates52@gmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE 

PRINTED NAME LOIS BARRY

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EMAIL loisbarry31@gmail.com

SIGNATURE 

PRINTED NAME CATHY WEBB

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SIGNATURE 

PRINTED NAME GERALDINE BRASETH-PALMER

ADDRESS 1602 GILCREST DRIVE LA GRANDE, Ore 97850

EMAIL 

SIGNATURE 


PRINTED NAME Jean BAPH


ADDRESS 1509 MADISON AVE LaGrande, OR 97850

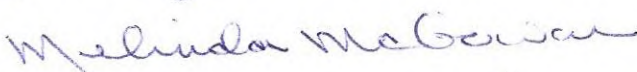
EMAIL JBaph19@gmail.com





I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE   
PRINTED NAME Damon Sexton  
ADDRESS 401 Balsa St La Grande, OR 97850  
EMAIL Sexton.damon@gmail.com

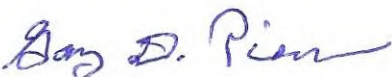
SIGNATURE   
PRINTED NAME Cory Sexton  
ADDRESS 401 Balsa Street La Grande OR 97850  
EMAIL Corytrix@gmail.com

SIGNATURE   
PRINTED NAME Melinda McGowan  
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SIGNATURE   
PRINTED NAME Keith D. Hudson  
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EMAIL Keithdhudson@gmail.com

SIGNATURE   
PRINTED NAME Laura Elly Hudson  
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EMAIL ellyhudson@gmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE 

PRINTED NAME Gary D. Pierson

ADDRESS 489 Modelaire Drive, La Grande OR 97850

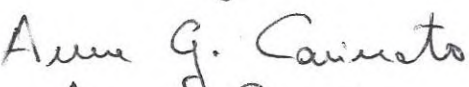
EMAIL —

SIGNATURE 

PRINTED NAME LYNN WHEELER DUNCAN

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EMAIL rlwd1910@gmail.com

SIGNATURE 

PRINTED NAME Anne G. Cavinato

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EMAIL acavinat@ecu.edu

SIGNATURE 

PRINTED NAME JOE HORST

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EMAIL joehorst@comi.com

SIGNATURE 

PRINTED NAME ANGELA Sherer

ADDRESS 91 W. Hawthorne Dr. LaGrande, OR 97850

EMAIL asherer@frontier.com



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SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
ADDRESS 97 W Hawthorne Dr, La Grande, Or. 97850  
EMAIL asherer@frontier.com

SIGNATURE *Heather M. Null*  
PRINTED NAME Heather M. Null  
ADDRESS 492 Modelaire Dr. La Grande, OR 97850  
EMAIL hnull@comi.com

SIGNATURE *Bert R. Frewing*  
PRINTED NAME Bert R. Frewing  
ADDRESS 709 South 12<sup>th</sup> Street La Grande, OR 97850  
EMAIL jeanfrewing@gmail.com

SIGNATURE *Lindsey McCullough*  
PRINTED NAME Lindsey McCullough  
ADDRESS 406 Balsa St., La Grande, OR 97850  
EMAIL lindz\_mm91@hotmail.com

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE *Merle E. Comfort*  
PRINTED NAME MERLE E. COMFORT  
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EMAIL merlecomfort@gmail.com

SIGNATURE *Robin L. Maille*  
PRINTED NAME Robin Maille  
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EMAIL r-maille@icloud.com

SIGNATURE *Bruce C Kevan*  
PRINTED NAME Bruce C Kevan  
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EMAIL bruce.kevan@lagrandesd.org

SIGNATURE *Carol S. Summers*  
PRINTED NAME CAROL S. SUMMERS  
ADDRESS 2811 Bekeler Ln - La Grande, OR  
EMAIL carolsummers1938@gmail.com

SIGNATURE *Caroline Kaye Juniper*  
PRINTED NAME Caroline Kaye Juniper  
ADDRESS 406 NTH ST. LaGrande - OR 97850  
EMAIL



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE *Gerald D. Juniper*  
PRINTED NAME *Gerald Darwin Juniper*  
ADDRESS *406 4<sup>th</sup> St. LaGrande, OR. 97850*  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL



Kelly Skovlin  
1404 Walnut St  
La Grande, OR 97850

PORTLAND OR 972

16 AUG 2019 PM 5 L



Energy facilities Siting Council  
c/o Kellen Tardavether, Senior Siting Analyst  
Oregon Dept. of Energy  
550 Capitol St. NE  
Salem, OR 97301

RECEIVED

AUG 19 2019

DEPARTMENT OF ENERGY

97301-974299





August 15, 2019

Energy facilities Siting Council  
c/o Kellen Tardaewether, Sr Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, OR 97301

Subject: Idaho Power Application for a site  
Certificate for the Boardman to Hemingway  
Transmission Project 9/28/2018; Draft Proposed Order

Dear Chair Beyeler and Members of the Council:

COMMENT REGARDING THE BOARDMAN TO  
HEMINGWAY TRANSMISSION LINEDRAFT PROPOSED  
ORDER

The application is incomplete as Section X  
must include information regarding all receptors  
within 1/2 mi of site and include all noise sources  
required to be included in establishing the noise  
level generated directly or indirectly by the development

Idaho Power has not provided information adequate to determine if they are able to meet the noise standard, even with site certificate conditions.

Idaho Power has failed to comply with OAR 345-021-0010(1)(X) which states that Exhibit X must include information about noise generated by construction and operation of the project within  $\frac{1}{2}$  mi of the site boundary. The site boundary means "the perimeter of the site of a proposed energy facility, it's related or supporting facilities, all temporary laydown and staging areas and all corridors and micro siting corridors proposed by the applicant" (OAR 345-001-0010(55)).

- 1) The applicant lists the areas which are included in the site boundary in Exhibit F, however, they failed to include noise modeling or include all the receptors within the  $\frac{1}{2}$  mi. area beyond the site perimeter.
- 2) The applicant failed to do noise modeling for all noise sensitive property as they did not include churches, schools, libraries, or hospitals as required by the definition in OAR 340-035-0015(38).
- 3) The applicant also failed to include the noise identified in OAR 340-035-0035(1)(b)(B)(ii) as ~~not~~ being exempt from the ambient statistical noise



cont.  
3) level indirectly caused by or attributable to that source including all its related activities. This section states, "Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b)-(f), (j), and (k) of this rule, shall not be excluded from this ambient measurement."

The application is not complete prior to the applicant finishing Exhibit X to include all sources by this rule as well as all receptors within  $\frac{1}{2}$  mi of the entire site boundary. No decisions can be made absent an accurate accounting of the predicted noise impacts which has not occurred.

No Proposed Order can be issued until the developer has shown that they meet the requirements at the time a site certificate is issued. OAR 345-015-0190(5) allows the department to find the application is complete when the applicant has submitted information adequate for the Council to make findings or impose conditions on all applicable Council Standards. While not all information required by OAR 345-021-0000 and 0010 must be submitted, there must be information adequate to show they meet the requirements or will meet them by implementing the conditions contained in the site certificate. The draft site certificate does not assure that the noise standard will not be exceeded, and the developer has not provided noise modeling or included modeling for all required sources of noise to establish the ambient statistical noise level of the development for

all NSR's. Missing information includes: 1) Identification of all noise sensitive receptors within  $\frac{1}{2}$  mi of the entire site boundary; 2) Identification and notice to the owners of all noise sensitive properties; and 3. Modeling which includes Items (5) (b)-(f), (j), and (k) which cannot be excluded from the ambient noise measurement.

Sincerely,

Kelly Skollin

Kelly Skollin

1404 Walnut St

La Grande, OR 97850



August 19, 2019

Energy facilities Siting Council  
% Kellen Tardaewether, Sr. Analyst  
Oregon Dept of Energy  
550 Capitol St. NE  
Salem, OR 97301

Subject: Idaho Power Application for a Site  
Certificate for the Boardman to Hemingway  
Transmission Project 2/28/2018; Draft Proposal Order.

Dear Chair Beyeler and members of the Council:

Applicant failed to include all required sources of  
noise in their modeling of noise impacts of  
their development.

Idaho Power did not include any of the items  
listed in OAR 340-035-0035(1)(b)(B)(ii),  
which are only exempt from the noise measure-  
ment when the development occurs on a  
previously used site. When establishing  
ambient noise level for a new development

p4/3

on a site not previously used, it states: "Sources exempt from the requirements of section L1) of this rule, which are identified in subsections (5)(b)-(f), (j), and (k) of this rule, shall not be excluded from this ambient measurement."

The applicant's noise modeling only includes noise generated by the transmission line itself. Noise modeling must be corrected to include (A) Warning devices, (B) sounds created by road vehicles going through my neighborhood and other areas (C) Sounds created by any operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; bells, chimes or



carillons; (f) aircraft subject to pre-emptive federal regulations and (k) sounds created by the operation of road vehicle auxiliary equipment.

The application is not complete, without having the information regarding the additional noise sources, the department and the siting council lack the information regarding how many noise sensitive properties are impacted and by how much.

A proposed order cannot be issued until the developer submits all the information regarding the noise impacts of this development. This information must be available to decide if the standards are met or it can be met with additional site conditions. I am mostly concerned about what will happen noise-wise along my road where I have a massage therapy business. Noise will disturb my work.

Sincerely,  
Kelly Skovlin

Kelly Skovlin 1404 Walnut St. LaGrande, OR

## **TARDAEWETHER Kellen \* ODOE**

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**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:53 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.38.19.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter signed by me and 54 other residents of La Grande expressing our concerns regarding the B2H Project and we request that EFSC deny the Site Certificate.

I have also sent a bound copy of this material by the US Postal Service.

Sincerely,

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850



August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the usage of the "Local Streets" <sup>1</sup> specifically the Modelaire-Hawthorne Loop) <sup>2</sup>, hereafter referred to as the "loop", of La Grande to access the site entrance. This residential "loop" was constructed without sidewalks for a new development around the early 1960s.

According to OAR 345-022-0110, Public Services (pg. 5. April 2017) "The applicant...must address all permanent and temporary impacts of the facility on housing, traffic, safety, police and fire protection, health care and schools." <sup>3</sup>

My impression from reviewing the application Page 17 <sup>4</sup> is that the applicant has not fully examined the final portion of the intended route nor does it fully recognize or address the need for traffic mitigation. This "loop" is the only access to/from thirty-six houses to the rest of the city. The area to the north of the "loop" is occupied by the Grande Ronde Hospital and Medical Clinic. Two blocks to the east is located the local high school and a grade school. <sup>2</sup>

In June of 2016, the Grande Ronde Hospital petitioned the City to have a conditional use for a parking lot expansion project next to Hawthorne. The Conditional Use Permit was approved subject to the Condition of Approval that "No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to residential standards and is not designed to support commercial traffic." <sup>5</sup>

The La Grande Director of Public Works, Kyle Carpenter, provided information regarding the widths for the streets in question. The two streets range from 33 feet to 37 feet in width with no sidewalks. I personally measured the area where the unpaved stem of Hawthorne leaves the "loop" to go up the hill. At the junction it measures 32 feet curb cut to curb cut and narrows to 18-21 feet in width as it goes around the corner up the hill. 6 The Public Works Director also provided pictures of the mapping system showing the existing utilities located in the "loop". 7-8. It should also be noted that from the entrance to the "loop" at Sunset Drive to the entrance of the site the road has a 16% grade.

Attachment U2 9 from the application shows an "Aerial Lift Crane to be Used During Construction" and the Transportation and Traffic Plan on page 19 10 lists a number of other vehicles anticipated to be used. Article 6.6 — Public Street Standards for the City of La Grande Section 6.6.002 states that "Collector Streets are designed to withstand normal trucks of an HS20 loading. Larger trucks are to utilize Arterial Streets where at all possible." 11 The majority of vehicles listed on page 19 exceed that limit and would be using a Local Street in addition to Arterial and Collector Streets. According to the Public Works Director the two streets in the "loop" were designed as Local Streets for residential use, able to accept the pressures of HS20 for the purpose of an occasional need such as a weekly garbage truck or an emergency vehicle but for no more than 5% of the time. The paving construction of these over 50 year old streets in the "loop" was not designed for repetitive use by vehicles heavier than a normal car. These streets in the "loop" have not been repaved, only patched when necessary, since they were first constructed.

The application does not address the "loop" specifically, but 3.1.2 (pg. 19) 10 and Table 6 (pg.17) 12 of the Transportation and Traffic Plan indicate there would be numerous vehicles using this route. Not knowing exactly just which vehicles would be on the "loop" daily but making a conservative estimate of 50 round trips (100 single) it would be a constant parade with one truck every 7.2 minutes. This is unacceptable for numerous reasons including constant excessive noise.

Not only would weight of the vehicles be a problem but the narrowness of the "loop" streets and the ninety degree blind curves that would have to be executed would be either impossible or extremely dangerous considering the turning radius for many of these large vehicles. The



already dangerous situation for a number of driveways that exit onto these "loop" streets at blind curves would be exacerbated. 13-14

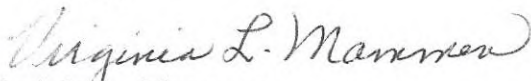
When considering only the traffic and safety issues listed above, the use of the "loop" as a part of the route for Idaho Power seems to be not only dangerous for the residents but unconscionable and irresponsible for Idaho Power to use such streets that are currently primarily for the neighborhood for walking (children to school, all ages for physical training), driving, or biking. I fear there are standards that are either not being considered or they are intentionally being ignored. There should be some common sense, courtesy and respect for the impact this project would impose on any neighborhood.

Finally, La Grande Ordinance Number 3077, which adopted Oregon State Traffic Laws by reference, states in Section 17 page 8 "It shall be unlawful for any person, firm or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes." Neither Modelaire/Hawthorne Loop nor Sunset Drive are posted as truck routes. 15-16

A site review and traffic plan must be completed prior to the cite certificate being issued and not 90 days prior to construction as stated.

For the above reasons I oppose the usage of the proposed route for the construction of the B2H transmission line.

Sincerely,

  
Virginia L. Mammen  
405 Balsa  
La Grande, Oregon. 97850

gmammen@eoni.com

**TABLE 1  
 STREET STANDARDS**

Functional Classification	ADT Volume	Speed (mph)	# of Travel Lanes	Travel Lane Width	Turn Lane or Median Width	Bike Lanes	Min. Bike Lane Width	On-Street parking
Downtown Arterial	10,000	20	2-3	11'	11'			both sides
Arterial	10,000	40-55	2-5	12'	4-14'	optional <sup>4</sup>	5'	none
Major Collector	2,000 - 10,000	25-45	2-3	11'	12'	required	5'	one or both sides
Minor Collector	1,000 - 2,000	25-35	2	11'	none	Optional <sup>5</sup>	5'	one or both sides
Local Street	0 - 1,000	15-25	2	10'	none	none	none	one or both sides

Functional Classification	Sidewalks	Min. Sidewalk Width	Planting Strip Width <sup>1</sup>	Total Paved Width <sup>2</sup>	Total ROW Width <sup>3</sup>	Private Access Spacing
Downtown Arterial	required	12'	3'6" <sup>6</sup>	49'	80'	200'
Arterial	required	5'	8'	36'-72'	80'-102'	200' - 400'
Major Collector	required	5'	8'	52'-60'	62'-90'	150' - 300'
Minor Collector	required	5'	8'	30'-48'	60'-78'	75' - 150'
Local Street	required	5'	8'	28'-36'	40'-66'	Each Lot

<sup>1</sup>A portion of the required planting strip width may be used instead as additional sidewalk width or reduced right of way, as appropriate.

<sup>2</sup>The minimum of the paved width was calculated with the following assumptions:

Arterials: Two (2) travel lanes, four foot (4') median divider, no center turn lane, no bike lanes.

Major Collectors: Two (2) travel lanes, two (2) bike lanes, no center turn lane, parking on one (1) side.

Minor Collectors: Two (2) travel lanes, parking on one (1) side of street, no bike lanes.

Local Streets: Two (2) travel lanes, parking on one (1) side of street.

The maximum paved width for each street was calculated assuming the inclusion of all required and optional facilities. Minimum paved widths for each street are as required in Section 6.2.005 of this Code.

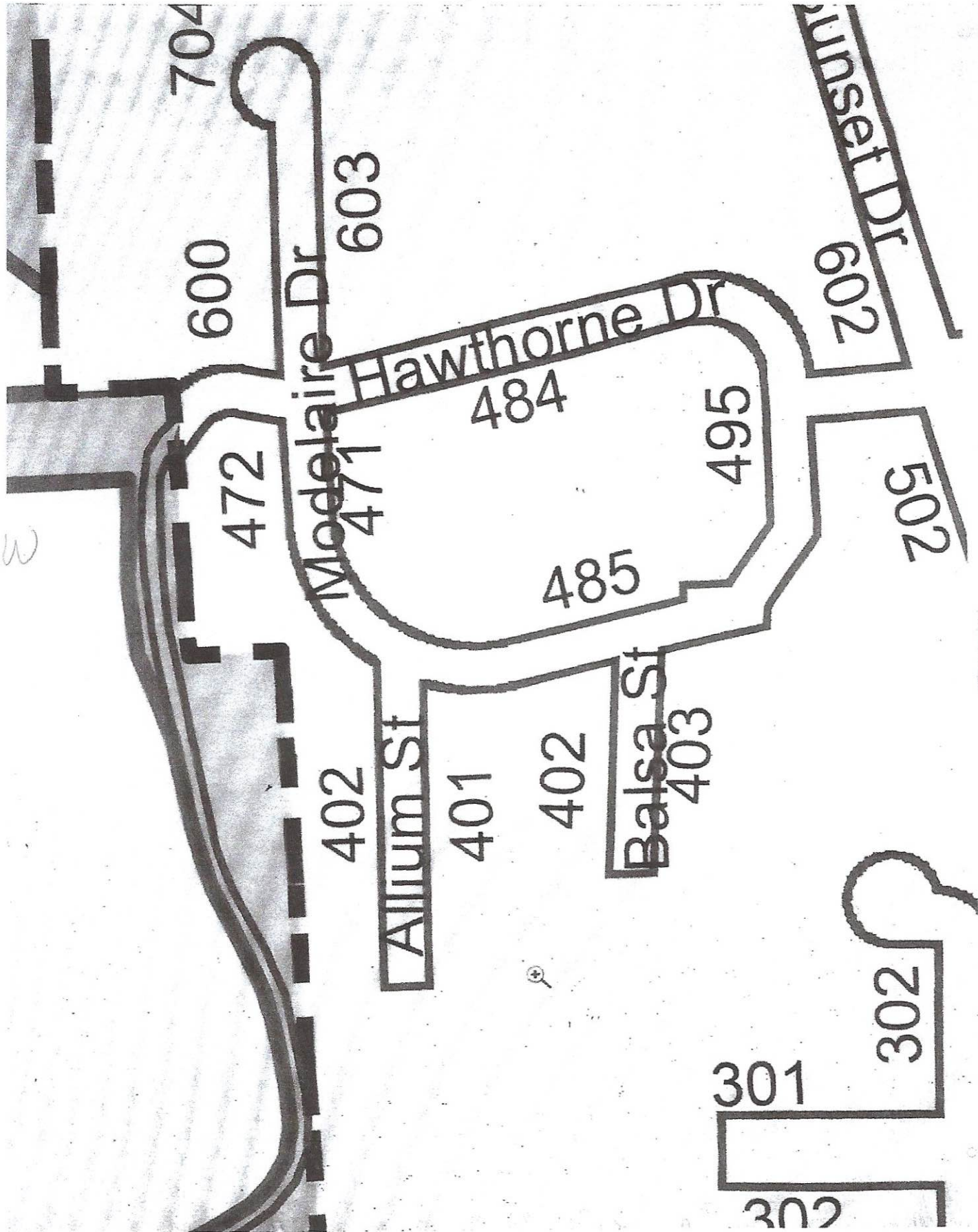
<sup>3</sup>These right-of-way width ranges are for new streets.

<sup>4</sup>Bike lanes should be provided on Arterials unless more desirable parallel facilities are designated and designed to accommodate bicycles.

<sup>5</sup> Bike lanes should be provided on Minor Collectors where traffic volumes or other factors warrant. Otherwise, Minor Collectors should be designed and designated as shared roadway facilities with wide outside travel lanes of 14' on important bike routes.



N



5



## Public Services

### OAR 345-022-0110

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## Waste Minimization

### OAR 345-022-0120

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## Need for a Facility

### OAR 345-023-0005

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## Specific Standards for Wind Facilities

### OAR 345-024-0010 and 345-024-0015

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## Specific Standards for Transmission Lines

### OAR 345-024-0090

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





Idaho Power Responses to Comments and Requests for Additional Information on the B2H APASC  
from the City of La Grande  
Compiled by ODOE. RAI's from the City of La Grande and Responses from IPC

U	U- Public Services include utilities such as road systems, water, sanitation services, power, and other amenities necessary for the construction.	Ordinance #2912, Series 1997 gives the City jurisdiction and control on all City street rights-of-way and Ordinance #3077, Series 2009, establishes the process and requirements for permits and licenses for uses of the streets that are not normal uses and may result in damages.	proposed helipad is a necessary supporting facility.	<p>The project construction has two major road systems through La Grande that are proposed for this project – Morgan Lake Road via Gekeler Lane, 'C' Avenue, Walnut Street, and on up Morgan Lake Road. Roads along these routes are used by the ambulance service for accessing the hospital, the public transit system on its normal daily route, citizens to access locations within and outside this area and also for the school bus system for transporting kids to the La Grande Middle School, La Grande High School and Central Elementary School. In addition to the vehicular modes of travel, those routes are heavily used by bicyclists and pedestrians. The other route that would be utilized is the same route with the exception of turning onto Sunset Drive and up Hawthorne Street to a private gravel road that heads up the area above Deal Canyon. Two other routes that are not addressed but that would be obvious access routes for construction would be South 12th Street and South 20th Street. As a general rule, City streets are built with ninety degree angles, which may restrict some</p> <p>To address the City's concerns regarding traffic and road use within the city's limits, Idaho Power has added the following proposed conditions to Exhibit K:</p> <p><u>Land Use Condition 9: Prior to construction in Union County, the site certificate holder shall complete the following to address traffic impacts in the county:</u></p> <p><u>a. The site certificate holder shall finalize, and submit to the department for its approval, a final county-specific transportation and traffic plan. The protective measures described in the draft Transportation and Traffic Plan in ASC Exhibit U, Attachment U-2, shall be included and implemented as part of the final county-specific plan, unless otherwise approved by the department;</u></p> <p><u>b. The site certificate holder shall work with the Union County Road Department and the City of La Grande Public Works Department to identify concerns related to Project construction traffic; and</u></p> <p><u>c. The site certificate holder shall develop traffic control measures to mitigate the effects of Project construction traffic;</u></p> <p><u>Land Use Condition 26: During construction in Union County, the site certificate holder shall conduct all work in compliance with the Union County-specific</u></p>
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#### IV. CONCLUSIONS

Based on the Findings of Fact above, the Planning Commission concludes that the application meets the requirements established in LDC Articles 8.5 and other applicable codes and Ordinances.

#### V. ORDER AND CONDITIONS OF APPROVAL

Based on the conclusions above, the Planning Commission approves the Conditional Use Permit as requested, subject to the following Conditions of Approval:

1. No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to a residential standards and is not designed to support commercial traffic.
2. Any existing driveway curb cuts along Hawthorn Drive bordering GRH's property, that are not used for residential purposes, shall be removed and replaced with City standard improvements that exists adjacent to such areas.
3. There is a storm sewer line extending through the project area that shall to be protected. Any improvements that may affect the storm sewer line shall be reviewed and approved by the Public Works Director.

#### VI. STANDARD CONDITIONS OF APPROVAL FOR LAND USE APPLICATIONS

1. **Revisions to a Valid Conditional Use Permit:** Any variations, alterations, or changes in a valid Conditional Use Permit requested by the deed holder shall be considered in accordance with the procedures of the Land Development Code as though a new Conditional Use Permit were being applied for.
2. **Public Works Standards:** Where a development involves work within the public right-of-way, a Right-of-Way Permit shall be obtained from the Public Works Department in advance of commencing with any work in the right-of-way. All improvements within the public right-of-way shall be in conformance with the most recent adopted City of La Grande *"Engineering Standard Drawings and Specifications for Construction Manual."*
3. **Building Permits:** The City of La Grande Building Department shall be contacted early in the process and in advance of development to coordinate and obtain required building, plumbing, electrical and/or mechanical permits. All required permits shall be acquired in advance of construction.

#### VI. OTHER PERMITS AND RESTRICTIONS

The applicant and property owner is herein advised that the use of the property involved in this application may require additional permits from the City of La Grande or other local, State or Federal Agencies.

The City of La Grande land use review, approval process and any decision issued does not take the place of, or relieve the applicant of responsibility for acquiring such other permits, or satisfy any restrictions or conditions thereon. The land use decision herein does not remove, alter, or impair in any way the covenants or restrictions imposed on this property by deed or other instrument.

The land use approvals granted by this decision shall be effective only when the rights granted herein have been exercised and commenced within one (1) year of the effective date of the decision. In case such right has not been exercised and commenced or an extension obtained, the approvals granted by this decision shall become null and void. A written request for an extension of time shall be filed with the Planning Department at least thirty (30) days prior to the expiration date of the approval.





Virginia Mammen &lt;4gmammen@gmail.com&gt;

**Modelaire Roadway Specifications**

3 messages

**Kyle Carpenter** <KCarpenter@cityoflagrande.org>  
To: "gmammen@eoni.com" <gmammen@eoni.com>

Fri, Jul 12, 2019 at 1:51 PM

I have attached a couple pictures of our mapping system that will give you a sense of where existing utilities are in Modelaire and Hawthorne. As for the widths of the roadways, I took measurements in multiple places, and found the following:

- Modelaire Drive (F Avenue) between Sunset Blvd and Hawthorne Drive is approximately 33 feet wide with a grade of about 5 Percent.
- Hawthorne Drive is approximately 32 feet wide at the bottom near the intersection of Modelaire/F Avenue and widens to about 34 feet where it intersects Modelaire at the top of the hill. The grade heading up hill is approximately 15.5 Percent.
- Modelaire Drive is generally 36 feet wide with some minor variability generally less than a foot (35' to 37'). On the southernmost segment of the roadway where the majority of the elevation gain is observed the grade is approximately 16 Percent.

Let me know if there are any other specifications of these roadways that you are interested in that I have missed. Have a great weekend and thanks for the treats, the guys were very appreciative.

*Kyle Carpenter, PE*

**Public Works Director**

**City of La Grande**

**Public Works**

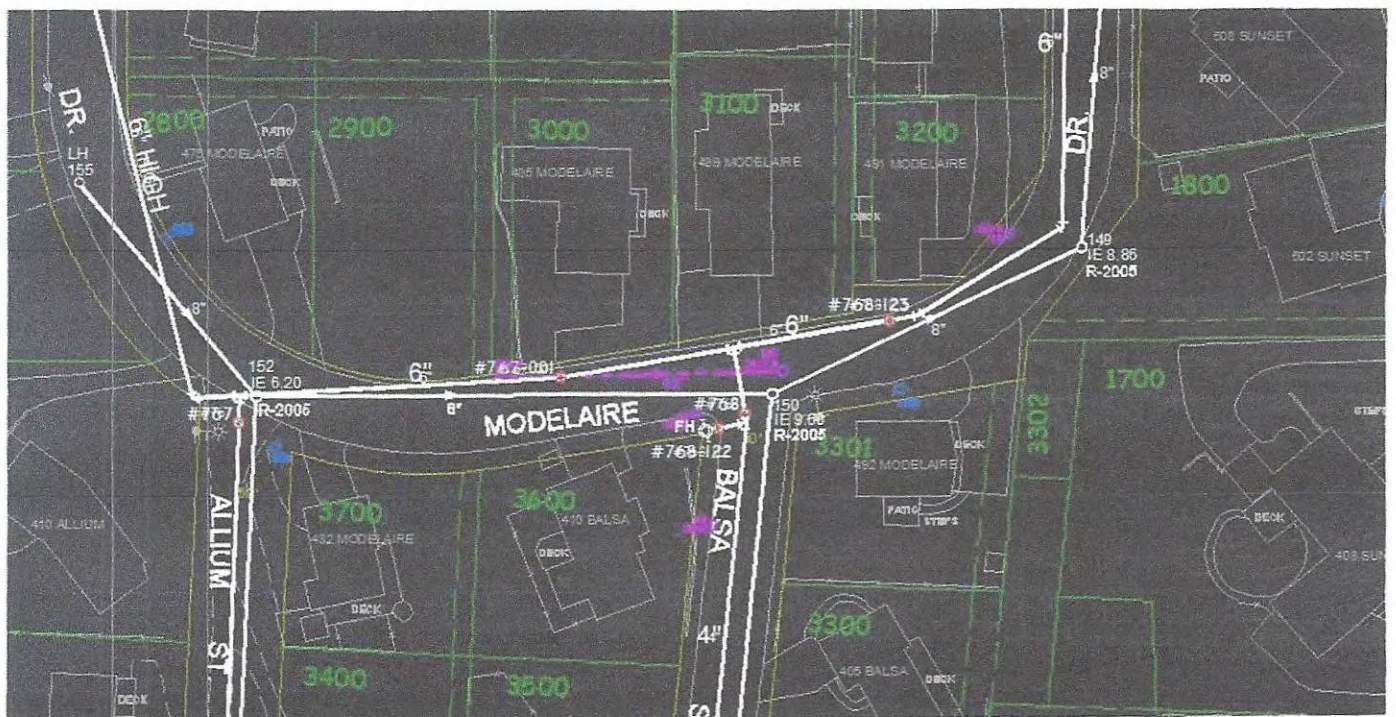
Ph: (541) 962-1325

Fax: (541) 963-4844

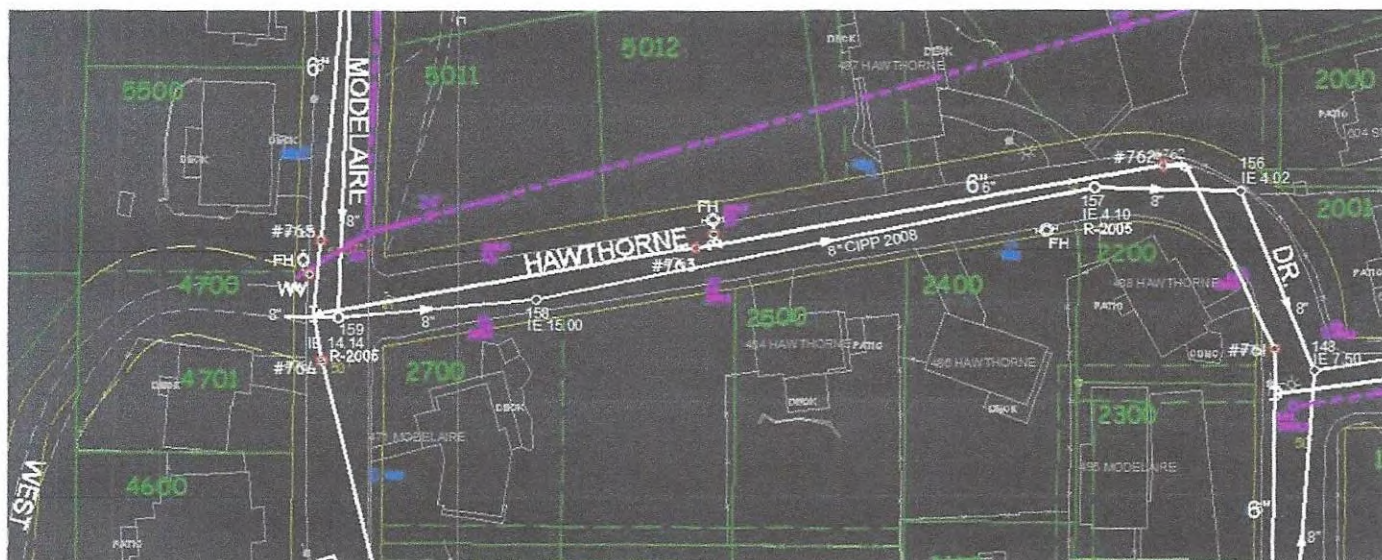
**2 attachments**

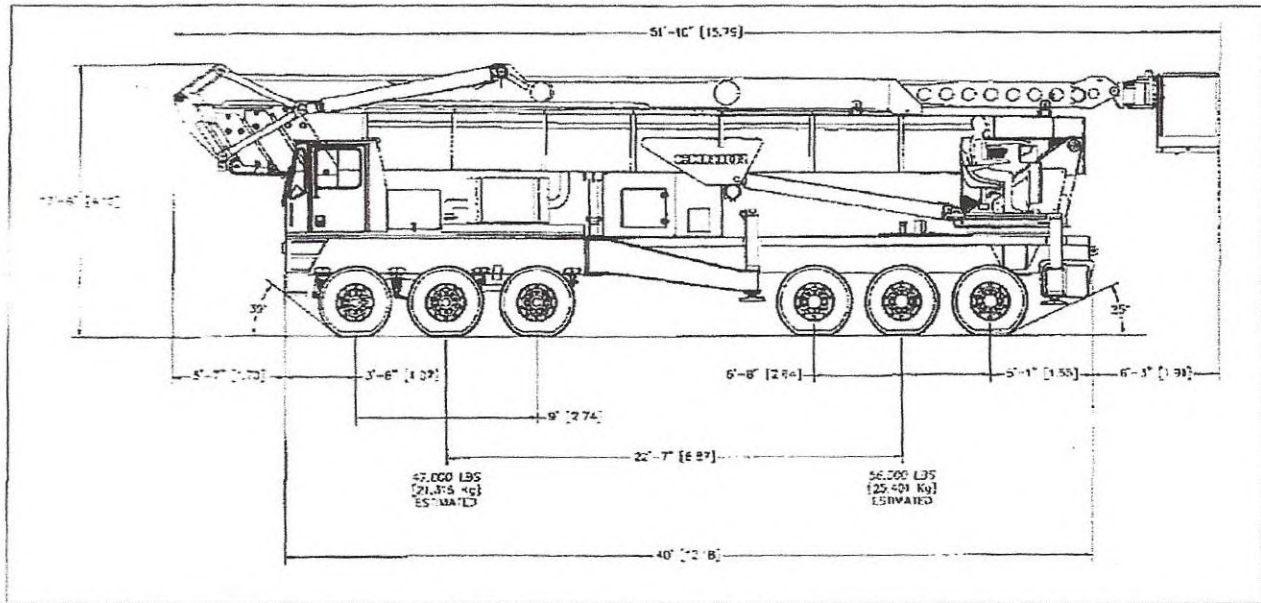
**Hawthorne.jpg**  
150K

**Modelaire.jpg**  
120K









**Figure 2. Example Aerial Lift Crane to be Used During Construction (Roadable Length 52 Feet; Width 8 Feet 6 Inches)**



The following is a summary of anticipated equipment to be used for each transmission-line construction activity.

- Survey work: pickup trucks or ATVs.
- Timber removal: pickup trucks, feller bunchers, dump trucks, wood chippers.
- Road construction: pickup trucks, bulldozers, motor graders, and water trucks.
- Hole digging, installation of directly embedded structures, or foundation installation: pickup trucks, 2-ton trucks, digger derrick trucks, hole diggers, bulldozers, concrete trucks, water trucks, cranes, hydro cranes, wagon rock drills, dump trucks, and front-end loaders.
- Hauling lattice steel members, tubular poles, braces, and hardware to the structure sites: steel haul trucks, carry alls, cranes, and forklifts.
- Assembly and erection of structures: pickup trucks, 2-ton trucks, carry alls, cranes, and a heavy lift helicopter.
- Wire installation: pickups, wire reel trailers, diesel tractors, cranes, 5-ton boom trucks, splicing trucks, three drum pullers, single drum pullers, tensioner, sagging dozers, carry-alls, static wire reel trailers, bucket trucks, and a light duty helicopter.
- Final cleanup, reclamation, and restoration: pickup trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, hydro-seed truck, and water trucks.

The highest level of traffic will be when the wire stringing operations begin while several other operations are occurring at the same time, which will likely include ROW clearing, installing foundations, hauling steel, and assembling and erecting structures. For the station work, the highest level of traffic will be during site grading and foundation installation. For the communication station sites, the highest level of traffic will be during grading and site preparation.

Detailed estimates of trips generated by transporting Project construction equipment will be provided by the construction contractor prior to construction.

### **3.1.3 Traffic Related to Timber Removal**

In forested areas, the Project will require removal of timber from the Project ROW and for construction and improvement of access roads. Specific timber harvest plans have not been finalized. Logs from timber clearing may be transported to nearby sawmills. Decisions regarding transportation routes for harvested timber will be made following completion of a timber harvest plan, and the number of log truck trips will be estimated when the timber harvest plan has been finalized. Logging slash will remain onsite if possible. For additional discussion regarding removal of timber in forested areas, see Exhibit K, Attachment K-2, ROW Clearing Assessment.

### **3.1.4 Impacts to V/C Ratios**

Based on the estimated trip generation numbers in Tables 4 and 6, a maximum of approximately 1,294 daily one-way vehicle trips are expected within any one construction spread. To facilitate traffic and other analyses, the two construction spreads are divided into smaller sections based on similar construction windows and seasonal weather restrictions. Not all construction sections will have the same number of concurrent construction activities, depending on how the construction contractor sequences and executes the Project. Some sections will have fewer daily vehicle trips. For the purposes of the traffic analysis, the spreads are divided into five sections with multi-use areas that could have additive traffic impacts. The sections are assumed to have approximately equal levels of activity. The 1,294 daily one-way trips per spread divided over five sections of more concentrated traffic results in 259 daily one-

## **ARTICLE 6.6 – PUBLIC STREET STANDARDS**

### **SECTION 6.6.001 - PURPOSE**

Upon the request of the La Grande City Council, a variety of street design standards have been reviewed and are now incorporated in the Land Development Code.

### **SECTION 6.6.002 - CLASS I IMPROVEMENT STANDARDS**

This classification will cover those streets that are designed to meet the standards for an expected life of twenty (20) years or more. The attached drawings shall be the minimum standard for those streets in this classification. All streets designated as Federal Aid Urban Streets (F.A.U.) shall be constructed under these design standards. Streets in this designation shall be constructed with sidewalks when at all possible in an effort to increase pedestrian safety. Collector streets are designed to withstand normal trucks of an HS 20 loading. Larger trucks are to utilize Arterial streets where at all possible. This level of development shall be the ultimate goal for all streets within the City of La Grande.

Possible means of financing available for this Class shall be methods A, B, C, D, E, F, G, and H in Section 6.6.006.

#### **A. Advantages**

1. The construction life is extended to a period above other City standards.
2. The visible aesthetics in relationship to having curbs and a blacktop surface with landscaping or concrete driveways and a sidewalk is generally appealing to the public.
3. Easy maintenance for the Public Works Department for cleaning and minor repair.
4. Storm sewer drainage is confined within the bounds of the curbs during minor flooding periods.
5. Parking is restricted to a solid barrier, that being the curb; this restricts parking in the area on the back side of the curb and confines travel to the street surface.
6. Defined areas for possible cross walks, signs, power poles, and other utilities that are restricted to the outside areas behind the curbs.
7. It allows for a wide range of financing methods and is to City standards for a ten (10) year Bancroft bonding.
8. Provides a dust free surface.

#### **B. Disadvantages**

1. The extreme high level of cost that is incurred with this type of development.

### **SECTION 6.6.003 - CLASS II IMPROVEMENT LEVEL**

Streets constructed in this classification shall be constructed to the same standards as Class I Streets with the exception of the form of drainage system. These streets shall meet the standards as shown on the attached drawing. This level of construction shall be only utilized in substitution for Class I Streets when it is determined by the City Council at the recommendation of the City Engineer or Engineering Superintendent, that an adequate drainage system cannot be installed for a Class I Street.



Table 6. Construction Vehicle Trips per Day per Construction Spread

Construction Crew Type	Construction Vehicles					
	Light Construction Vehicles			Heavy Construction Vehicles		
	Number of Pickups/ Mechanic Trucks (per day)	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)	Number of Other Vehicles	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)
Substation Construction	20	2	40	5	2	10
ROW Clearing	9	4	36	5	4	20
Roads/ Pad Grading	9	4	36	9	2	18
Foundations	9	2	18	5	8	40
Tower Lacing (assembly)	27	2	54	0	0	0
Tower Setting (erection)	20	2	40	0	0	0
Wire Stringing	9	4	36	9	4	36
Restoration	3	2	6	0	0	0
Blasting	5	4	20	0	0	0
Material Delivery	20	8	160	12	2	24
Mechanic and Equipment Mgmt.	5	6	30	0	0	0
Refueling	0	0	0	5	4	20
Dust Control	0	0	0	5	4	20
Construction Inspection	5	8	40	0	0	0
Concrete Testing	5	4	20	0	0	0
Environmental Compliance	9	6	54	0	0	0
Surveyors	5	3	30	0	0	0
<b>Totals</b>	—	—	<b>620</b>	—	—	<b>188</b>

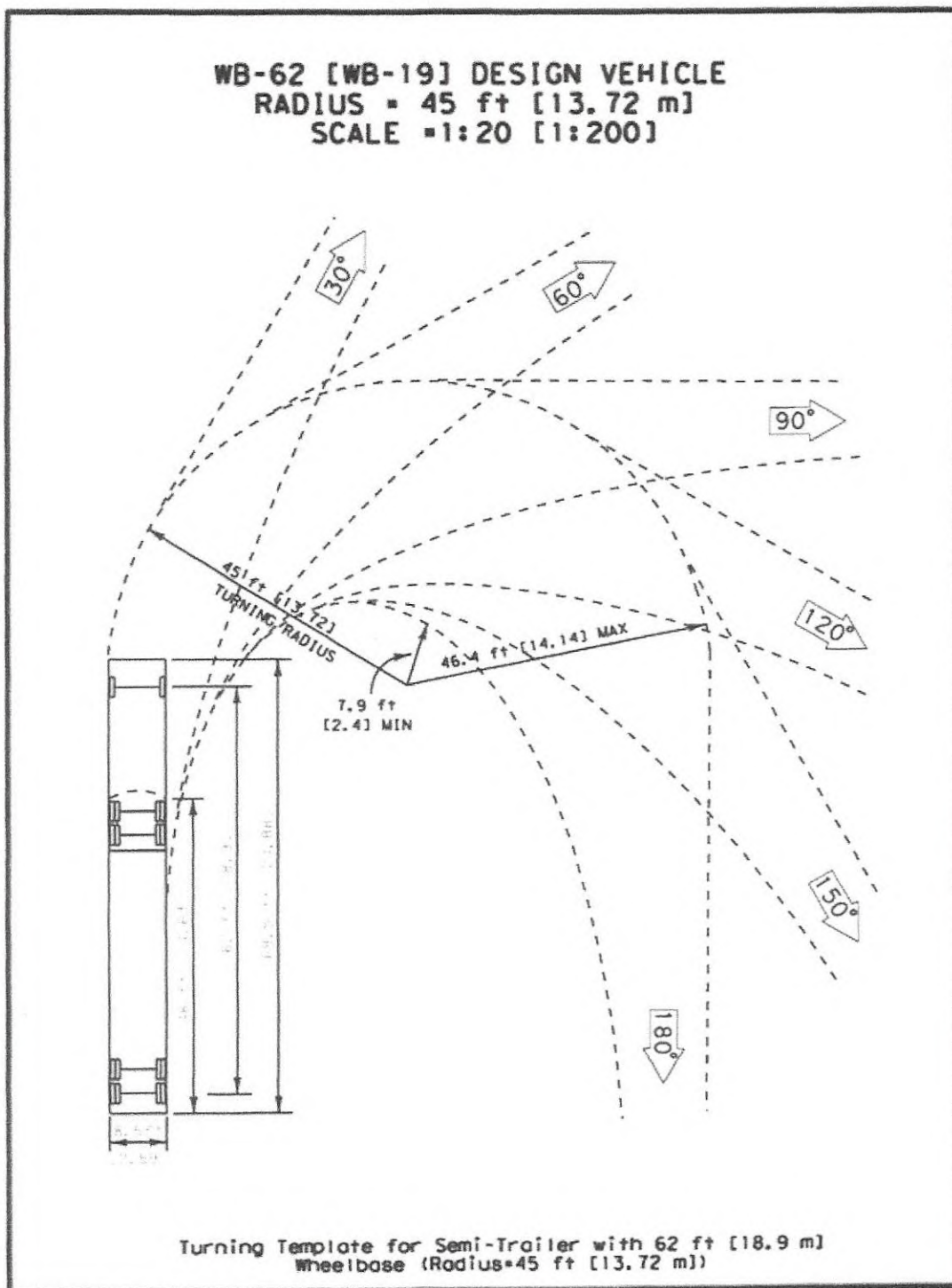
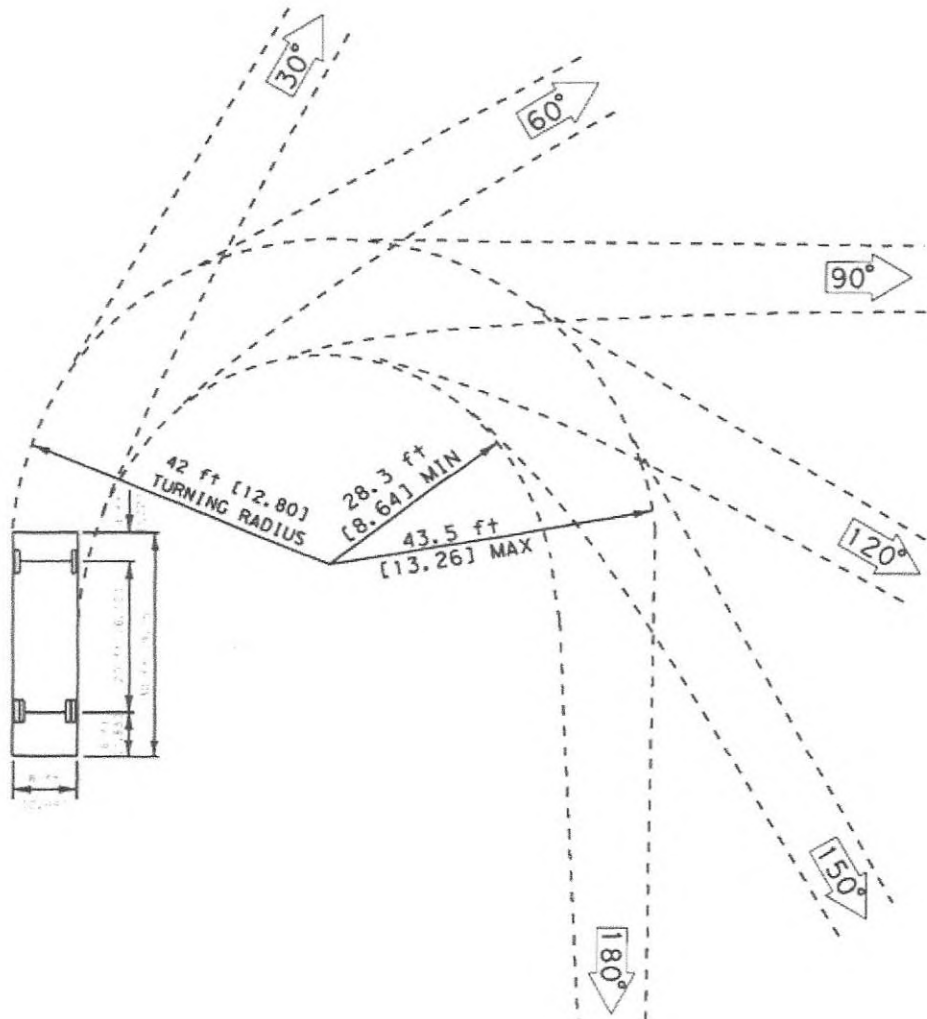


Figure 7-4. Turning Template for Semi-Trailer with 62 ft [18.9 m] Wheelbase, (not to scale). Click [here](#) to see a PDF of the image.



**SINGLE UNIT (SU) TRUCK DESIGN VEHICLE**  
**TURNING RADIUS = 42 ft [12.80 m]**  
**SCALE = 1:20 [1:200]**



Turning Template for Single Unit Trucks or Buses

Exhibit 15

**CITY OF LA GRANDE  
ORDINANCE NUMBER 3077  
SERIES 2009**

**AN ORDINANCE CONTROLLING VEHICULAR AND PEDESTRIAN TRAFFIC, PARADES  
AND PROCESSIONS AND ISSUANCE OF PERMITS; PROVIDING PENALTIES; AND  
REPEALING ORDINANCE NUMBER 2845, SERIES 1993; ALL AMENDING ORDINANCES  
AND ALL OTHER ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH;  
AND DECLARING AN EFFECTIVE DATE**

THE CITY OF LA GRANDE ORDAINS AS FOLLOWS:

**Section 1.** This Ordinance may be cited as the City of La Grande Uniform Traffic Ordinance.

**Section 2.** APPLICABILITY OF STATE TRAFFIC LAWS.

Oregon Revised Statutes, Chapter 153, and the Oregon Vehicle Code, ORS Chapter 801 and 822, as now constituted, are adopted by reference. Violation of an adopted provision of those chapters is an offense against the City.

**Section 3.** DEFINITIONS

In addition to those definitions contained in the Oregon state Motor Vehicle Code, the following words or phrases, except where the context clearly indicates a different meaning, shall mean:

a. Alley

A street or highway primarily intended to provide access to the rear or side of lots or buildings in urban areas and not intended for through vehicular traffic.

b. Bicycle

A bicycle is a vehicle that:

1. Is designed to be operated on the ground on wheels;
2. has a seat or saddle for use of the rider;
3. is designed to travel with not more than three (3) wheels in contact with the ground;
4. is propelled exclusively by human power; and,
5. has every wheel more than fourteen inches (14") in diameter or two (2) tandem wheels, either of which is more than fourteen inches (14") in diameter.

c. Bicycle Lane

That part of the highway, adjacent to the roadway, designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

d. Bicycle Path

A public way, not part of a highway, which is designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

e. Block

The part of one side of a street lying between the two (2) nearest cross streets.

f. Central Business District



a. City Regulation of Special Movement of Oversized Load

The applicant shall submit an application to the City Manager or designee, showing the terminal points of the purported movement; the proposed route; the nature of the movement requested, including the weight and dimensions of the vehicle, load, machine, building, or structure to be moved; the time, date and duration of the proposed movement.

b. Special Movement Permit

A permit shall be required to move any vehicle, structure, or load on, or to access a street when, after preparation for movement, the vehicle, structure or load exceeds fourteen feet (14') in height, requires the use of guy wires, or could result in the blockage of a street. An approved application may serve as a permit, and a copy of the approved application shall be provided to the applicant.


**Section 17. TRUCK ROUTES**

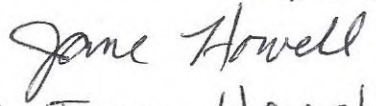
- a. It shall be unlawful for any person, firm, or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes.
- b. Any vehicle with a gross weight over 26,000, pounds specifically picking up deliveries or making deliveries to any business or residence located on a street that is not a truck route will be exempted if the vehicle is driven from the truck route to the destination in the shortest, most direct, and safest route.
- c. The use of Jacob brakes shall not be allowed within the city limits of La Grande, Oregon.
- d. Truck routes will be posted as follows:
  1. Walnut street north from the city limits to C Avenue;
  2. C Avenue east from Walnut Street to Gekeler Avenue;
  3. Gekeler Avenue east to the city limits;
  4. 12th street south from Gekeler Avenue to the city limits;
  5. 2nd Street south from the city limits to Adams Avenue;
  6. Monroe Avenue east from Spruce Street to Highway 82;
  7. Jackson Avenue east from Spruce Street, and
  8. Spruce Street south from the city limits to Monroe.

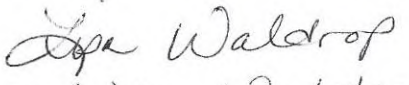
**Section 18. IMPOUNDMENT AND DETENTION OF VEHICLES**

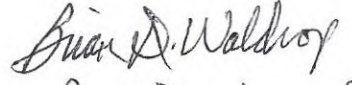
- a. Whenever a vehicle is placed in a manner or location that constitutes an obstruction to traffic or a hazard to public safety, a police officer or enforcement officer shall order the owner or operator of the vehicle to remove said vehicle. If the vehicle is unattended, the officer or enforcement officer may cause the vehicle to be towed and stored at the owner's expense. The owner shall be liable for the costs of towing and storing, notwithstanding that the vehicle was parked by another or that the vehicle was initially parked in a safe manner but subsequently became an obstruction or hazard.

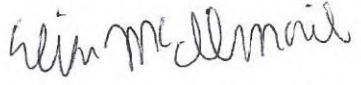
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SIGNATURE   
PRINTED NAME James E. Howell II  
ADDRESS 482 Modelaire Dr  
EMAIL jinhowell2@frontier.com

SIGNATURE   
PRINTED NAME Jane Howell  
ADDRESS 482 Modelaire DR  
EMAIL d.janehowell@gmail.com

SIGNATURE   
PRINTED NAME Lisa Waldrop  
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EMAIL ldjw62@gmail.com

SIGNATURE   
PRINTED NAME BRIAN D. WALDROP  
ADDRESS 475 MODELAIRES DR.  
EMAIL bdwaldrop58@gmail.com

SIGNATURE   
PRINTED NAME EUSE MCILMAIL  
ADDRESS 476 MODELAIRES DR.  
EMAIL mcilmail154@hotmail.com




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SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

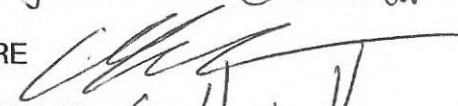
  
Jessie Huxell  
472 Modelaire Dr. LaGrande OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

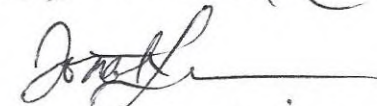
  
C. Huxell  
472 Modelaire Dr. LG, OR 97850  
CHRIS Huxell @ EMAIL. Com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Jonah Lindeman  
702 Modelaire LaGrande  
jlindeman@rpi.ag

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

Marie Skinner  
Marie Skinner  
208 3rd LaGrande  
marieskinner@hotmail.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

Blake Bars  
Blake Bars  
1101 G Ave La Grande  
blakebars@gmail.com

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SIGNATURE

*D. Dale Mammen*

PRINTED NAME

D. Dale Mammen

ADDRESS

405 BRISA, La Grande, OR

EMAIL

d.mammen@conl.com

SIGNATURE

*Jim Kreider*

PRINTED NAME

Jim Kreider

ADDRESS

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La Grande, OR 97850

EMAIL

jkreider@campblackdog.org

SIGNATURE

*Judie Arritola*

PRINTED NAME

Judie Arritola

ADDRESS

603 Modelaire La Grande, OR

EMAIL

jitola@charter.net

SIGNATURE

*Pasco Arritola*

PRINTED NAME

Pasco Arritola

ADDRESS

603 Modelaire La Grande, OR

EMAIL

PJTOLA@CHARTER.NET

SIGNATURE

*John Barutz*

PRINTED NAME

John Barutz

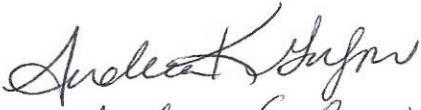
ADDRESS


484 Hawthorne LG, OR 97850


EMAIL





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SIGNATURE   
PRINTED NAME Andrea Gulzow  
ADDRESS 486 Hawthorne DR, LA Grande  
EMAIL foreverfamily33@aol.com

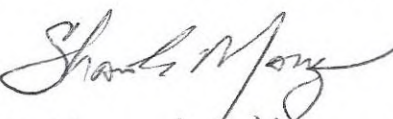
SIGNATURE   
PRINTED NAME Frances E. Lillard  
ADDRESS 471 Modelaire Dr. L.G.  
EMAIL

SIGNATURE   
PRINTED NAME Brent H. Smith  
ADDRESS 410 Allium St  
EMAIL smithbrent@gmail.com

SIGNATURE   
PRINTED NAME M. Jeannette Smith  
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EMAIL jeannetterampf@gmail.com

SIGNATURE   
PRINTED NAME KIMBERLEY HEITSTUMAN  
ADDRESS 2409 CENTURY LP, LA GRANDE, OR 97850  
EMAIL kimheitstuman@hotmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE: 

PRINTED NAME Shawn K. Mangum

ADDRESS 2905 E. M. Ave,

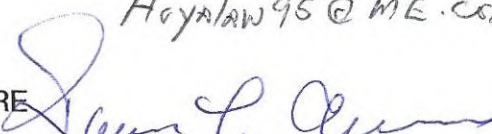
EMAIL Hoyalan95@ME.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
CONNIE L. ALLEN 541-9637720  
410 BALSA STREET LAGRANDE, OREGON 97858  
N/A

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

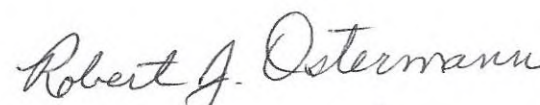
  
Linda Snyder  
491 Modelaire Dr

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
Robert J. Ostermann  
495 Modelaire Dr. La Grande, OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Robin J. Ostermann  
495 Modelaire Dr La Grande, OR 97850



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SIGNATURE

*Jonathan D. White*

PRINTED NAME

Jonathan D. White

ADDRESS

485 Modelaire Dr

EMAIL

jondwhite418@gmail.com

SIGNATURE

*Robin Stedfeld*

PRINTED NAME

Robin Stedfeld

ADDRESS

485 Modelaine Dr. La Grande

EMAIL

rstedfeld@yahoo.com

SIGNATURE

*Rita Allen*

PRINTED NAME

Rita Allen

ADDRESS

410 Balsa St. La Grande Or.

EMAIL

SIGNATURE

*Ruth Schumacher Yeates*

PRINTED NAME

Ruth Schumacher Yeates

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408 Sunset Drive La Grande, OR 97850

EMAIL

ruthschumacheryeates@gmail.com

SIGNATURE

*John Yeates*

PRINTED NAME

JOHN YEATES

ADDRESS

408 SUNSET DR. LA GRANDE, OR 97850

EMAIL

jyeates52@gmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE 

PRINTED NAME LOIS BARRY

ADDRESS P.O. Box 566, La Grande, OR 97850

EMAIL loisbarry31@gmail.com

SIGNATURE 

PRINTED NAME CATHY WEBB

ADDRESS 1708 CEDAR ST. LAGRANDE, OR 97850

EMAIL thunkski@gmail.com

SIGNATURE 

PRINTED NAME Jack L. Martin


ADDRESS 1412 Gilcrest Dr. LaGrande

EMAIL Buff Martin 27 @GMail.com

SIGNATURE 

PRINTED NAME GERALDINE BRASETH-PALMER

ADDRESS 1602 GILCREST DRIVE LA GRANDE, Ore 97850

EMAIL 

SIGNATURE 


PRINTED NAME Jean BAPH


ADDRESS 1509 MADISON AVE LaGrande, OR 97850

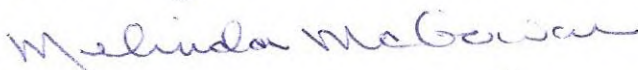
EMAIL JBaph19@gmail.com





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SIGNATURE   
PRINTED NAME Damon Sexton  
ADDRESS 401 Balsa St La Grande, OR 97850  
EMAIL Sexton.damon@gmail.com

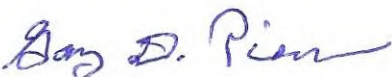
SIGNATURE   
PRINTED NAME Cory Sexton  
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SIGNATURE   
PRINTED NAME Melinda McGowan  
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EMAIL melindamegowan@gmail.com

SIGNATURE   
PRINTED NAME Keith D. Hudson  
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EMAIL Keithdhudson@gmail.com

SIGNATURE   
PRINTED NAME Laura Elly Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL ellyhudson@gmail.com

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SIGNATURE 

PRINTED NAME Gary D. Pierson

ADDRESS 489 Modelaire Drive, La Grande OR 97850

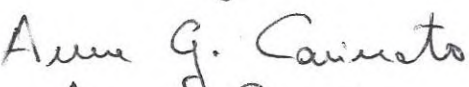
EMAIL —

SIGNATURE 

PRINTED NAME LYNN WHEELER DUNCAN

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EMAIL rlwd1910@gmail.com

SIGNATURE 

PRINTED NAME Anne G. Cavinato

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EMAIL acavinat@ecu.edu

SIGNATURE 

PRINTED NAME JOE HORST

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EMAIL joehorst@comi.com

SIGNATURE 

PRINTED NAME ANGELA Sherer

ADDRESS 91 W. Hawthorne Dr. LaGrande, OR 97850

EMAIL asherer@frontier.com



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SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
ADDRESS 97 W Hawthorne Dr, La Grande, Or. 97850  
EMAIL asherer@frontier.com

SIGNATURE *Heather M. Null*  
PRINTED NAME Heather M. Null  
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EMAIL hnull@comi.com

SIGNATURE *Bert R. Freewing*  
PRINTED NAME Bert R. Freewing  
ADDRESS 709 South 12<sup>th</sup> Street La Grande, OR 97850  
EMAIL jeanfreewing@gmail.com

SIGNATURE *Lindsey McCullough*  
PRINTED NAME Lindsey McCullough  
ADDRESS 406 Balsa St., La Grande, OR 97850  
EMAIL lindz\_mm91@hotmail.com

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

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SIGNATURE *Merle E. Comfort*  
PRINTED NAME MERLE E. COMFORT  
ADDRESS 209 SCORPIO DRIVE LA GRANDE OR 97850  
EMAIL merlecomfort@gmail.com

SIGNATURE *Robin L. Maille*  
PRINTED NAME Robin Maille  
ADDRESS 401 Cedar St., La Grande  
EMAIL r-maille@icloud.com

SIGNATURE *Bruce C Kevan*  
PRINTED NAME Bruce C Kevan  
ADDRESS 1511 W Ave LG  
EMAIL bruce.kevan@lagrandesd.org

SIGNATURE *Carol S. Summers*  
PRINTED NAME CAROL S. SUMMERS  
ADDRESS 2811 Bekeler Ln - La Grande, OR  
EMAIL carolsummers1938@gmail.com

SIGNATURE *Caroline Kaye Juniper*  
PRINTED NAME Caroline Kaye Juniper  
ADDRESS 406 NTH ST. LaGrande - OR 97850  
EMAIL



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SIGNATURE *Gerald D. Juniper*  
PRINTED NAME *Gerald Darwin Juniper*  
ADDRESS *406 4<sup>th</sup> St. LaGrande, OR. 97850*  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:28 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposal Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.14.06.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter sign by me and 46 other residents of La Grande expressing our concerns regarding the B2H Project and requesting that EFSC Deny the Site Certificate.

I have also sent a bound copy of this material by US Postal Service.

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850



August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, Oregon. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the predicted noise levels resulting from construction and operation of the proposed Boardman to Hemingway Transmission Line Project. I would like to address the noise coming from the blasting and rock breaking specifically above the area at the top of Modelaire Drive 1 both to the north and the south of that area and also the construction traffic noise that that will impact the west hills and the area below.

In Exhibit X page X-9 3.3.1.1 2 blasting and rock breaking is mentioned saying that "Modern blasting techniques include the electronically controlled ignition of multiple small explosive charges in an area of rock that are delayed fractions of second, resulting in a total event that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140dBA at the blast location or over 90 dBA within 500 feet." This sounds oh so "don't worry about it, it will be OK just over in a split second." Living in this area off Modelaire Drive, I don't find this at all comforting. And the fact that this will be overseen by properly licensed personnel and all of the necessary authorizations doesn't help anything either.

The area in question, which for such inordinate construction is extremely close to many residents, has been my home for over 50 years and during

related medical problems and exhibit various reactions to loud noises.<sup>10</sup>  
These children also live in the neighborhoods to be affected by the noise so they would be impacted coming and going to school, at home and also while at school. To impose the constant possibility of loud noises is cruel, disrespectful and totally unacceptable. <sup>11</sup>

For a project like this involving blasting and heavy machinery noise so close to homes, schools, and medical facilities impacting hundreds of peoples' daily lives, the day to day agitation, wondering what is coming next, fear and being on constant alert are not just addressed by some type of mitigation but must be addressed by a route that is much less impactful to peoples' safety, sanity, and health.

Sincerely,

A handwritten signature in cursive script that reads "Virginia L. Mammen".

Virginia L. Mammen

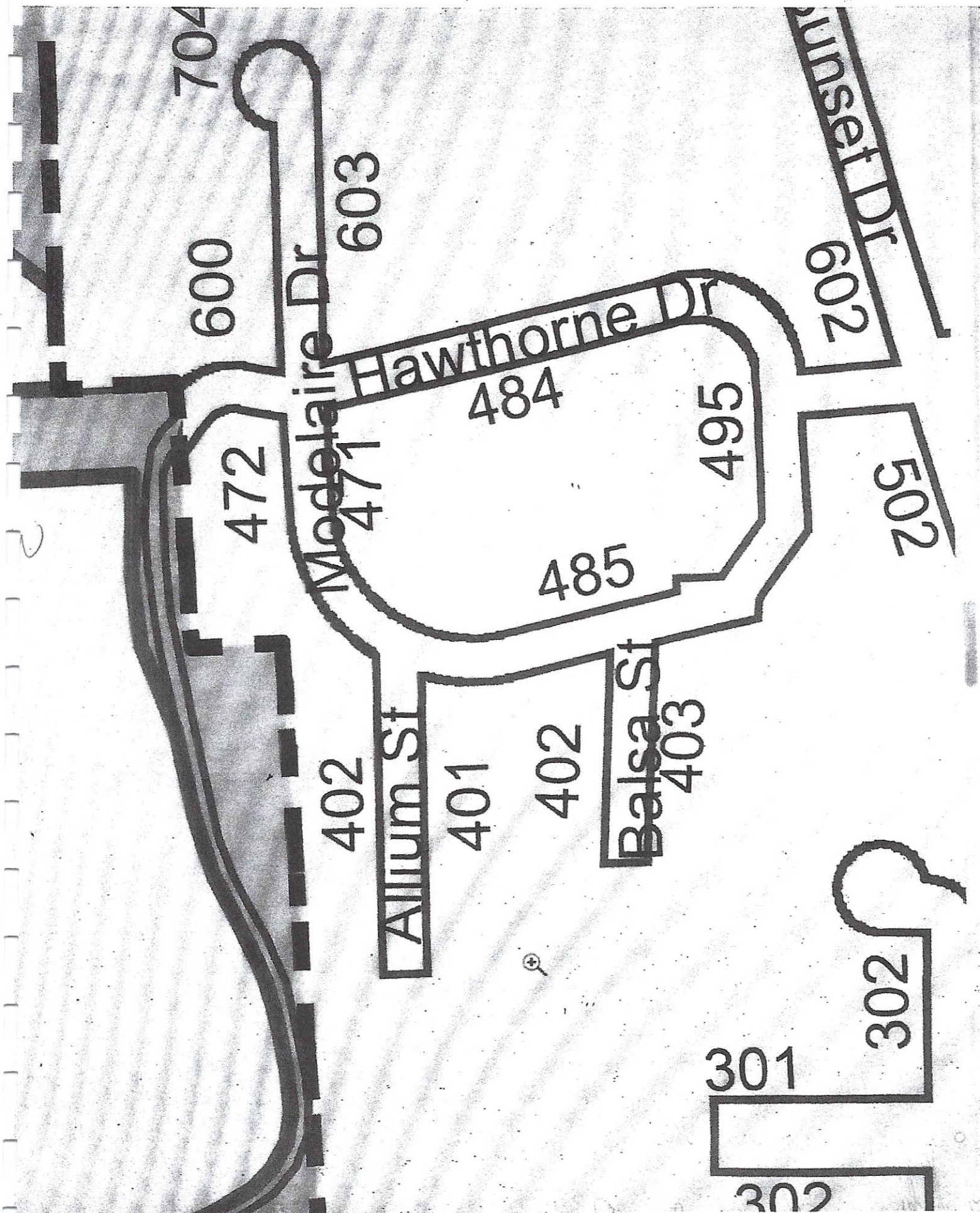
405 Balsa

La Grande, Oregon 97850

gmammen@eoni.com



N





### 3.3 Predicted Noise Levels

OAR 345-021-0010(1)(x)(A): Predicted noise levels resulting from construction and operation of the proposed facility.

#### 3.3.1 Construction Noise

##### 3.3.1.1 Predicted Construction Noise Levels

Project construction will occur sequentially, moving along the length of the Project route, or in other areas such as near access roads, structure sites, conductor pulling sites, and staging and maintenance areas. Overhead transmission line construction is typically completed in the following stages, but various construction activities may overlap, with multiple construction crews operating simultaneously:

- Site access and preparation
- Installation of structure foundations
- Erecting of support structures
- Stringing of conductors, shield wire, and fiber-optic ground wire

The following subsections discuss certain construction activities that will periodically generate audible noise, including blasting and rock breaking, implosive devices used during conductor stringing, helicopter operations, and vehicle traffic.

#### **Blasting and Rock Breaking**

Blasting is a short-duration event as compared to rock removal methods, such as using track rig drills, rock breakers, jackhammers, rotary percussion drills, core barrels, or rotary rock drills. Modern blasting techniques include the electronically controlled ignition of multiple small-explosive charges in an area of rock that are delayed fractions of second, resulting in a total event duration that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140 dBA at the blast location or over 90 dBA within 500 feet.

Lattice tower foundations for the Project typically will be installed using drilled shafts or piers; however, if hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture the rock to reach the required depth to install the structure foundations. Final blasting locations will not be identified until an investigative geotechnical survey of the analysis area is conducted during the detailed design.

The contracted blasting specialist will prepare a blasting plan that demonstrate compliance with applicable state and local blasting regulations, including the use of properly licensed personnel and the acquisition of necessary authorizations. The Framework Blasting Plan is set forth in Exhibit G, Attachment G-5.

#### **Implosive Devices**

An implosive conductor splice consists of a split-second detonation with sound and flash. Implosive splicing activities are anticipated to be limited to daytime hours. A blasting plan will be developed by an individual certified and licensed to perform the work. The plan will communicate all safety and technical requirements including, but not limited to, delineation of the controlled access zone and distance away from residences.



## **Public Services**

### **OAR 345-022-0110**

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## **Waste Minimization**

### **OAR 345-022-0120**

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## **Need for a Facility**

### **OAR 345-023-0005**

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## **Specific Standards for Wind Facilities**

### **OAR 345-024-0010 and 345-024-0015**

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## **Specific Standards for Transmission Lines**

### **OAR 345-024-0090**

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





[Home](#) [Business](#) [Voting](#) [Elections](#) [State Archives](#) [Audits](#)

## Department of Environmental Quality

### Chapter 340

#### Division 35

#### NOISE CONTROL REGULATIONS

**340-035-0035****Noise Control Regulations for Industry and Commerce****(1) Standards and Regulations:**

(a) **Existing Noise Sources.** No person owning or controlling an existing industrial or commercial noise source shall cause or permit the operation of that noise source if the statistical noise levels generated by that source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 7, except as otherwise provided in these rules. [Table not included. See ED. NOTE.]

**(b) New Noise Sources:**

(A) **New Sources Located on Previously Used Sites.** No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies. [Table not included. See ED. NOTE.]

**(B) New Sources Located on Previously Unused Site:**

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b)-(f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

**(iii) For noise levels generated or caused by a wind energy facility:**

(I) The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

(II) The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with wind speed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.

(III) The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

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(2) Compliance. Upon written notification from the Director, the owner or controller of an industrial or commercial noise source operating in violation of the adopted rules shall submit a compliance schedule acceptable to the Department. The schedule will set forth the dates, terms, and conditions by which the person responsible for the noise source shall comply with the adopted rules.

(3) Measurement:

(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

(B) That point on the noise sensitive property line nearest the noise source.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);

(b) Nothing in this rule shall preclude the Department from conducting separate or additional noise tests and measurements. Therefore, when requested by the Department, the owner or operator of an industrial or commercial noise source shall provide the following:

(A) Access to the site;

(B) Reasonable facilities, where available, including but not limited to, electric power and ladders adequate to perform the testing;

(C) Cooperation in the reasonable operation, manipulation, or shutdown of various equipment or operations as needed to ascertain the source of sound and measure its emission.

(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:

(a) Emergency equipment not operated on a regular or scheduled basis;

(b) Warning devices not operating continuously for more than 5 minutes;

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

(d) Sounds resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad only to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; but this exemption does not apply to any standard, control, license, regulation, or restriction necessitated by special local conditions which is approved by the Administrator of the EPA after consultation with the Secretary of Transportation pursuant to procedures set forth in Section 17(c)(2) of the Act;

(e) Sounds created by bells, chimes, or carillons;

(f) Sounds not electronically amplified which are created by or generated at sporting, amusement, and entertainment events, except those sounds which are regulated under other noise standards. An event is a noteworthy happening and does not include informal, frequent, or ongoing activities such as, but not limited to, those which normally occur at bowling alleys or amusement parks operating in one location for a significant period of time;

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment;

(i) Sounds created by lawn care maintenance and snow removal equipment;

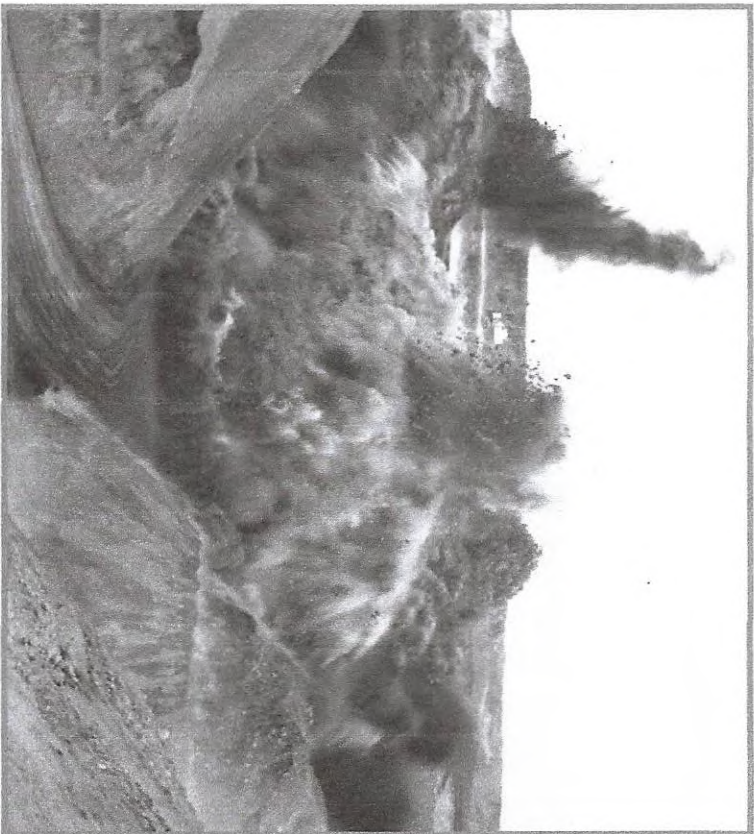
(j) Sounds generated by the operation of aircraft and subject to pre-emptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not pre-emptively regulated by the federal government or controlled under OAR 340-035-0045;

## Controlling the Adverse Effects of Blasting

This module addresses the control of offsite impacts that result from blasting, namely:

- vibrations,
- airblast, and
- flyrock.

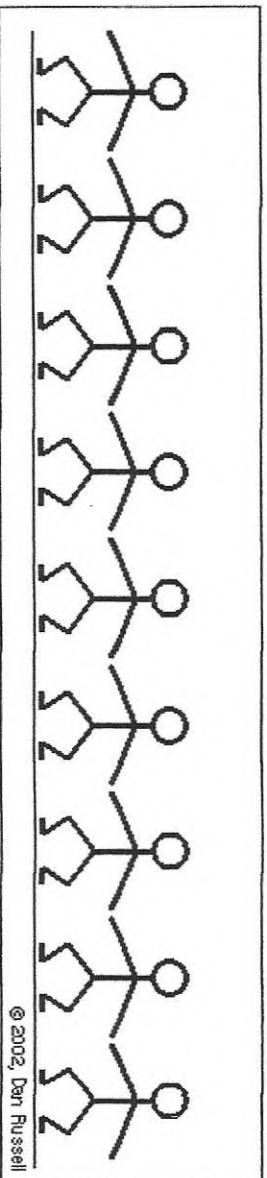
Much of the information in the module is derived from the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The performance standards apply to all surface coal mines. Similar standards have been adopted on some State and local levels and applied to non-coal blasting operations such as quarrying and construction.





## Part I: Ground Vibrations, Airblast, and Flyrock

Explosive energy is used to break rock. However, the use of this energy is not 100-percent efficient. Some of the energy escapes into the atmosphere to generate **airblast or air vibrations**. Some of the energy also leaves the blast site through the surface soil and bedrock in the form of **ground vibrations**.



Both air and ground vibrations create waves that disturb the material in which they travel. When these waves encounter a structure, they cause it to shake. Ground vibrations enter the house through the basement and airblast enters the house through the walls and roof.

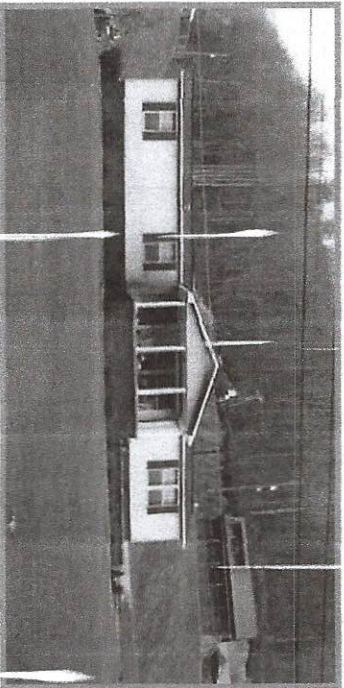
Airblast may be audible (noise) or in-audible (concussion). When outside a house the blast may be heard because of the noise, however noise has little impact on the structure. The concussion wave causes the structure to shake and rattles objects hanging on walls or sitting on shelves. This "interior noise" will alarm and startle people living in the house.

**Flyrock** is debris ejected from the blast site that is traveling through the air or along the ground. Flyrock the single most dangerous adverse effect that can cause property damage and personal injury or death.



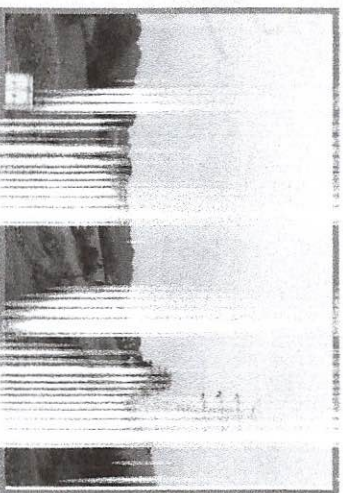
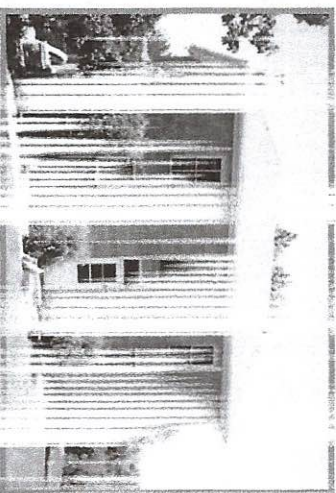
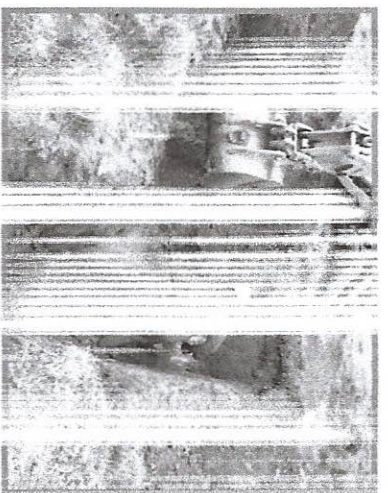
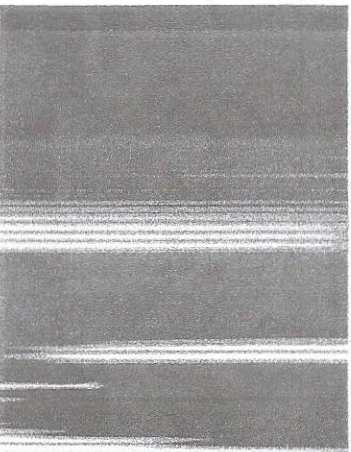
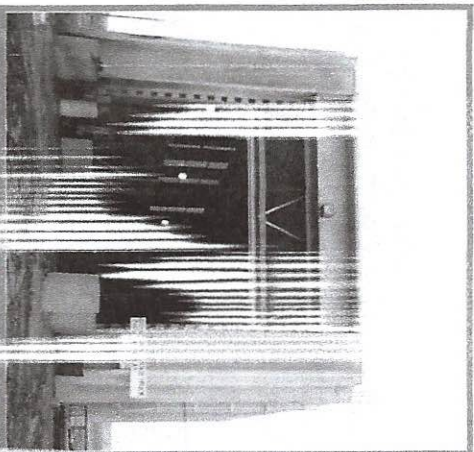
# Blasting Impacts on Structures

Both above-ground and below-ground structures are susceptible to vibration impacts. Structures can include onsite mine offices and buildings, as well as offsite residences, schools, churches, power-transmission lines, and buried pipelines. Some of these structures may include historic or cultural features sensitive to even low levels of vibrations.



It is important to understand:

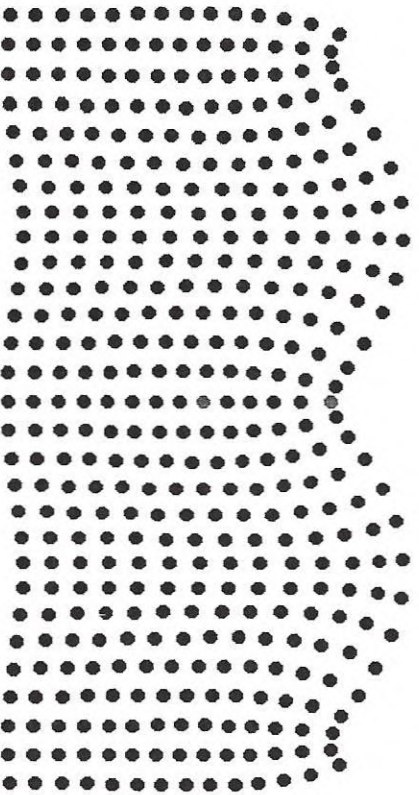
1. the causes of ground vibrations and airblast, and
2. what practices can be followed to control and minimize the adverse effects





# Ground Vibrations

Ground vibrations propagate away from a blast site as Rayleigh (or surface) waves. These waves form a disturbance in the ground that displaces particles of soil or rock as they pass by. Particle motions are quite complicated. At the ground surface (free boundary), measured particle motions have the greatest displacements, and displacements decrease with depth (see the illustration below). At a depth of between 20 to 50 feet below ground surface, particle displacements are barely detectable. Structures that are well coupled to the ground tend to move with this motion; structures buried in the ground are less affected by surface motions.



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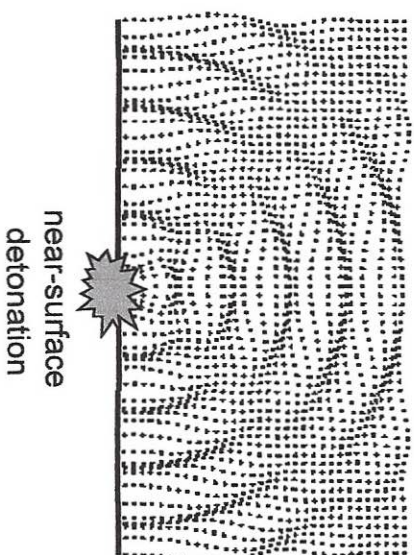
Ground vibrations are measured in terms of **particle velocity** and are reported in inches per second (ips) or the speed at which a particle of soil or rock moves.

At typical blasting distances from residential structures, the ground only moves with displacements equal to the thickness of a piece of writing paper. In terms of displacement, this equates to hundredths of an inch; visually, such movement cannot be detected.

# Airblast

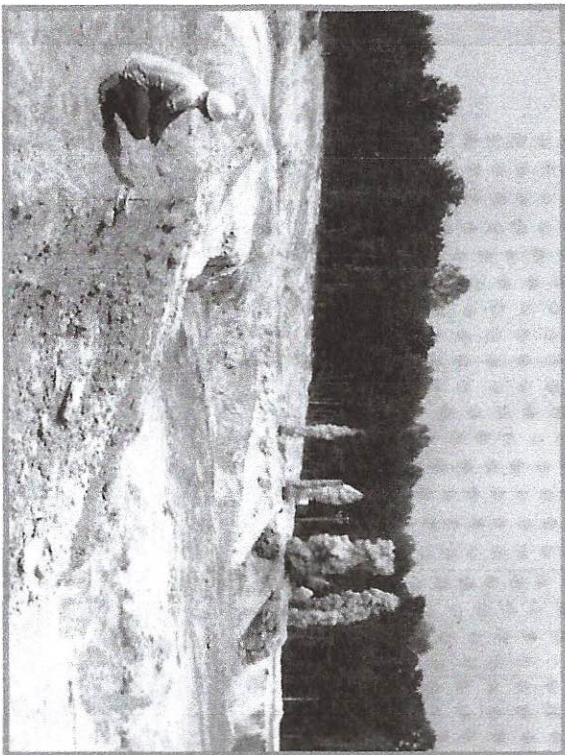
2 Airblast is measured as a pressure in pounds per square  
5 inch (psi) and is often reported in terms of **decibels (dB)**.

Airblast is a pressure wave that that may be audible or in-audible. Elevated airblast levels are generated when explosive energy in the form gases escape from the detonating blast holes. Energy escapes either through the top stemming or through fractures in the rock along the face or at the ground surface.



Airblast radiates outward from the blast site in all directions and can travel long distances. Sound waves travel much slower (1,100 ft/s) than ground vibrations (about 5,000 – 20,000 ft/s). Hence, airblast arrives at offsite structures later than do ground vibrations.

Both ground vibrations and airblast cause structures to shake structures. Occupants in structures that are located far from a blast may experience shaking from vibration and airblast as two separate, closely spaced events. This can be particularly bothersome, as it prolongs the duration of structure shaking and leads the property owner to think that two separate blasts occurred.





# Structure Response

As ground and air vibrations reach a structure, each will cause it to shake. Structure response is dependant on the vibration characteristics (frequency and amplitude) and structure type.

Ground Vibrations enter the house through the basement. This is like shaking the bottom of a flag pole. Movement at the top of the pole depends on how (frequency) and how hard (amplitude) the bottom of the pole is shaken. If shaken at just the right pace, or at the pole's natural frequency, the top will move significantly compared to the bottom. Motion at the top is amplified from the bottom motion.

All blast damage studies have measured incoming ground vibrations at the ground surface. The observed structure amplifications were typically between 1 to 4 times the ground vibration. Structure response below ground level is the same or less than the incoming vibrations

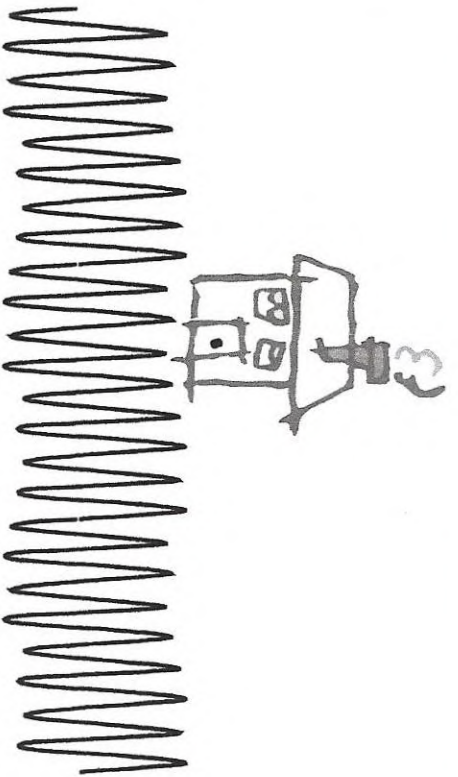
Airblast enters the house through the roof and walls. Like ground vibrations, the frequency and amplitude of the vibrations affect structure response. However the low frequency events (concussion) that most strongly affect structures is normally only a one or two cycle event.

Due to the different arrival times of ground and air vibrations, occupants may feel two distinct impacts on the house.



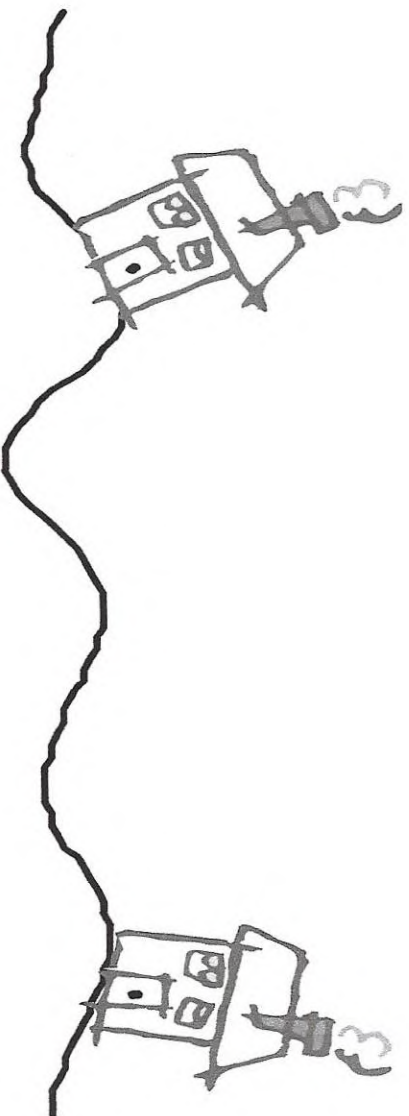
# Ground Vibration Structure Response

Exhibit 59



High frequencies do not promote structure shaking. The length of a single high-frequency wave cycle is short as compared with the dimension of a structure. A structure does not significantly respond to high frequencies.

On the other hand, low-frequency wave cycles are long as compared with the dimensions of structures. Accordingly, low frequencies tend to efficiently couple energy into structures and to promote higher-amplitude, long-duration shaking.





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## A noisy problem

***People often become more sensitive to noise as they age, which can affect their mental and physical health.***

Published: March, 2019

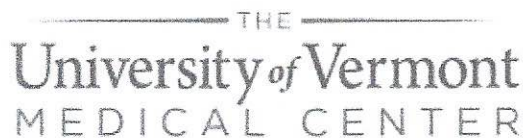


Image: © Juanmonino/Getty Images

Are you more sensitive to noises than you used to be? Do certain sounds now feel too loud and jarring? Don't worry; it's actually quite normal.

Age-related hearing loss is common among older adults and affects about two-thirds of men in their 70s and 85% of men ages 80 and older. Although it's not clear why, this can also make people hypersensitive to sounds that they used to tolerate easily, which in turn can affect their well-being.

"Exposure to noises from crowds, traffic, and other everyday sounds can become harder to tolerate and increase stress levels, leading to anxiety and a reduction in overall quality of life," says Dr. Stephanie Tompkins, an audiologist with Harvard-affiliated Massachusetts Eye and Ear. "As your sensitivity to noises increases, this can lead to greater isolation, too, as you may try to avoid potentially noisy places and situations."



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Quiet in the Hospital: How Noise...

## Quiet in the Hospital: How Noise Reduction Helps Patients Heal

on June 7, 2018 (<https://medcenterblog.uvmhealth.org/innovations/hospital-noise-reduction/>) in Innovation  
(<https://medcenterblog.uvmhealth.org/category/innovations/>) by UVM Medical Center  
(<https://medcenterblog.uvmhealth.org/author/uvmmedcenter/>)

Noise. It is present in almost every aspect of our lives. From the traffic in the streets, to the fan that provides us white noise in the background to sleep, noise exists. Unfortunately, like stress, too much of it can have a negative impact on a person's health and rest. Some sounds we do like to hear, such as birds chirping, signaling spring in Vermont, but what about sounds in a hospital?

Many of us get admitted to hospitals when we are too sick to take care of ourselves at home. We expect exceptional care from physicians and nurses and, of course, to rest in order to help our bodies heal. We understand that some noises in a hospital are necessary for care; however, others simply aren't.

### The Sounds of a Hospital

Many organizations, including the UVM Medical Center, have high tech equipment, which greatly assists in the delivery of care to our patients, but can also be noisy. Sometimes, healthcare providers are the source of the noise as we interact and communicate with our patients and other health team members.

Another factor is visits from families and friends during visiting hours. It is difficult when one's roommate is trying to rest in the opposite bed. Yet, we need to be cognizant of noise in patient care areas as sounds can be magnified and misinterpreted, increasing agitation and even confusion for some patients.

We become accustomed to the noise; our patients are not.

### The Research on Noise, Quiet, and Healing



Research has shown that noise plays a negative role in healing and that decreasing noise in patient care areas aids in healing processes and helps facilitate speedier recoveries for patients. Patients are able to heal, sleep better and recover more quickly when able to rest. A quieter environment can also help decrease burnout for hospital staff.

Studies show that patients are more likely to develop negative side effects from a noisy hospital, such as sleep disturbances, elevated blood pressure and heart rate, and increased use of pain medications.

Noise can also increase annoyance levels for staff. One study indicated noise, such as talking inside and outside patient rooms, is the most common source of noise as well as visitors' voices, TVs, and behaviors of other patients.

Research concluded that best practices to eliminate noise from talking included staff education about noise reduction, public indicators such as sound monitors, a quiet time protocol, and lower cost environmental fixes, such as fixing noisy doors and squeaky wheels. Lastly, by introducing scripting with routine monitoring, patients' perception of quietness increased and the perception of noise decreased.

## How We Address Noise at the UVM Medical Center

We introduced the "Culture of Quiet" Organizational initiative. The Nursing Professional Governance Patient and Family Experience Global council continued this work. After convening a small task force of nurses and assessing current quiet strategies, we introduced the following tactics:

- Many hospital units have designated 'quiet hours' with automatically dimming of lights at quiet hour intervals.
- Signage is visible in most patient care areas to help keep patients, family, and visitors aware. Throughout the hospital, you will see signs with a relaxing pair of Adirondack chairs and the sun setting with details on when a unit has quiet hours.
- Many semi-private rooms have windows in doors, so doors can be closed allowing for patient rest.
- We offer headphones for TVs and earplugs to help minimize sounds.
- In-patient kits contain a sleeping mask and other comfort items that can be provided at time of admission. Each kit contains a card and explains, 'the best healing occurs in a quiet environment.'
- New education material is available for staff, patients and visitors-just ask to review the next time visiting.
- Some units offer white noise machines, others have this built in.
- Noisy equipment such as wheels and doors can be tagged and replaced.
- Our facility and distribution staff have changed their cleaning and supply delivery schedules to accommodate patient care.
- Healthcare teams within the hospital are focusing efforts to cluster patient care to minimize interruptions to provide restful moments.

## How you can help us.

We ask patients and visitors to hold us accountable when sounds are too loud. We want our community to alert us when noise levels are high and we will do what we can to minimize sound. In turn, we ask that all members of the healthcare team, patients, family, and friends be aware to keep voices soft, cell phones on vibrate, and hold each other accountable for these are the times of the day when our patients take pause to rest and positively impact their healing.

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# Dangerous Decibels: Hospital Noise More Than a Nuisance

By Diane Sparacino, Staff Writer

Imagine a world where hospitals have become so noisy that the annoyance has topped hospital complaints, even more than for the tasteless, Jell-O-laden hospital food (Deardorff, 2011). If you're a nurse, you know that we're already there – with noise levels reaching nearly that of a chainsaw (Garcia, 2012). In fact, for more than five decades, hospital noise has seen a steady rise (ScienceDaily, 2005).

But it wasn't always that way. At one time, hospitals were virtually noise-free like libraries – respected spaces, preserved as quiet zones. The culture was such that a loud visitor might be silenced by a nurse's purposeful glare or sharply delivered "Shhh!" As early as 1859, the importance of maintaining a quiet environment for patients was a topic for discussion. In Florence Nightingale's book, "Notes on Nursing," she described needless noise as "the most cruel absence of care" (Deardorff, 2011).

Fast forward to 1995, when the World Health Organization (WHO) outlined its hospital noise guidelines, suggesting that patient room sound levels not exceed 35 decibels (dB). Yet since 1960, the average daytime hospital noise levels around the world have steadily risen to more than double the





acceptable level (from 57 to 72 dB), with nighttime levels increasing from 42 to 60 dB. WHO found that the issue was not only pervasive, but high noise levels remained fairly consistent across the board, despite the type of hospital (ScienceDaily, 2005).

Researchers at Johns Hopkins University began to look into the noise problem in 2003. They maintained that excessive noise not only hindered the ability for patients to rest, but raised the risk for medical errors. Other studies blamed hospital noise for a possible increase in healing time and a contributing factor in stress-related burnout among healthcare workers (ScienceDaily, 2005).

Technology is, of course, partly to blame. State-of-the-art machines, banks of useful alarms, respirators, generators, powerful ventilation systems and intercoms all add up to a lot of unwanted racket. When human voices are added to the mix, (i.e., staff members being forced to speak loudly over the steady din of medical equipment), it's anything but a restful environment. For the recovering patient in need of sleep, that can be a real issue (Deardorff, 2011).

Contributing to the problem, experts say, are the materials used in hospitals. Because they must be easily sanitized, surfaces cannot be porous where they could harbor disease-causing organisms. Rather than using noise-muffling materials like carpet, acoustic tiles and other soft surfaces, hospitals have traditionally been outfitted using smooth, hard surfaces – especially in patient rooms. Good for cleanliness – not so great for dampening sounds, which tend to bounce around the typical hospital (Deardorff, 2011).

Which brings us to the most recent research, published January 2012 in the *Archives of Internal Medicine*. In the report, Jordan Yoder, BSE, from the Pritzker School of Medicine, University of Chicago, and his colleagues associated elevated noise levels with “clinically significant sleep loss among hospitalized patients,” perhaps causing a delay in their recovery time (Garcia, 2012). During the 155-day study period, researchers examined hospital sound levels. The numbers far exceeded (WHO) recommendations for average hospital-room noise levels, with the peak noise at an average 80.3 dB – nearly as loud as a chainsaw or electric sander (85 dB), and well over the recommended maximum of 40 dB. And while nights tended to be quieter, they were still noisier than recommended allowances, with “a mean maximum sound level of 69.7 dB” (Garcia, 2012).

Perhaps most interestingly, the researchers broke down the sources of noise into categories: “Staff conversation (65%), roommates (54%), alarms (42%), intercoms (39%), and pagers (38%) were the most common sources of noise disruption reported by patients” (Garcia, 2012). “Despite the importance of sleep for recovery, hospital noise may put patients at risk for sleep loss and its associated negative effects,” they wrote. In addition, researchers found that the intensive care and surgical wards had some work to do in dampening noise levels, with ICU peaking at 67 dB and 42 dB for surgical areas. Both far exceeded WHO’s 30 dB patient room recommendation (Garcia, 2012).

Besides patient sleep deprivation, which itself can lead to a multitude of health problems including high blood sugar, high blood pressure and fatigue, studies have reported that elevated noise levels can increase heart and respiratory rates, blood pressure and cortisol levels. Recovery room noise causes patients to request more pain medication, and preterm infants “are at increased risk for hearing loss, abnormal brain and sensory development, and speech and language problems when exposed to prolonged and excessive noise” (Deardorff, 2011).

There is still more research to be done, of course, but Yoder and his colleagues had good news, as well; much of the hospital noise they identified is modifiable, suggesting that hospitals can take steps to successfully create a quieter environment for both patients and healthcare providers (Garcia, 2012).

Around the country, "quiet campaigns" have been launched by hospitals in an attempt to dampen nighttime noise. Besides dimming lights and asking staff to keep their voices down at night, they are working to eliminate overhead paging systems, replace wall and/or floor coverings – even the clang of metal trashcans. Northwestern's Prentice Women's Hospital in Chicago was built with noise reduction in mind, replacing the idea of centralized nursing stations with the advent of smaller, multiple stations (Deardorff, 2011)

Billed as "one of the nation's largest hospital construction projects," Palomar Medical Center in North San Diego County is a state-of-the-art facility that has been designed "to encourage quietness," according to Tina Pope, Palomar Health Service Excellence Manager. Slated to open its doors this August, the hospital will feature a new nursing call system to route calls directly to staff and help eliminate the need for overhead paging, de-centralized nursing stations and clear sig lines, allowing staff to check on patients without having to leave unit doors open. With measures already in place including "Quiet Hospital" badges on staff and posters at the entrance of every unit, a "Quiet at Night" campaign (9 p.m. – 6 a.m.), and a "Quiet Champions" program that encourages staff to report noise problems, Palomar is one of a growing number of hospitals working toward a new era of quiet.

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## Noises Are Truly Horrible For People Who Have PTSD

20 Mar '2018 [Sound](#)

Noise is a really big issue for PTSD survivors: people who have mental health problems because of their traumas. How are they connected?

Almost everybody has experienced a trauma. But some traumas are more scarring than others and can even result in long-lasting mental disorders like **PTSD**, which can have an extreme impact on someone's life. It's a disorder that can develop in the brain after a horrifying experience, like war or a car crash.

### Symptoms

The symptoms of PTSD are, to say the least, not pleasant. They range from nightmares about the traumatic events, disturbing thoughts and feelings, anxiety, trying to avoid anything that has something to do with the traumatic event, and an increase in the fight-or-flight response.

Around ten percent of the population suffers from PTSD, according to data from **NCBI**, a part of the US National Library of Medicine. And, remarkably enough, that percentage is the same for people who suffer from tinnitus (the sound of a constant beep in your ears). The NCBI clearly sees a link between the two.

PTSD survivors also suffer from the Exaggerated Startle Syndrome, with anxiety and actions in an extreme and irrational way too loud noises and bangs. And then there are the sounds that remind them of the sounds during the traumatic events, which can trigger memories of the





## Fear

PTSD can also cause a general fear of sounds: phonophobia, or a fear of some specific sounds: misophonia. Survivors of the disorder also are generally much more sensitive to sounds and perceive them as much louder than other people would.

All of this makes the life of people with PTSD very hard. If you think you are suffering from this, consult your doctor. Really, please do it. For yourself, and for the ones you love.

Do you have PTSD and would you like to tell your experiences to us? We are always very open and interested to hear what you have to say. And again: if you haven't done it yet, visit your doctor, please. Thank you!

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Front Psychol. 2013; 4: 578.

PMCID: PMC3757288

Published online 2013 Aug 30. doi: [10.3389/fpsyg.2013.00578](https://doi.org/10.3389/fpsyg.2013.00578)

PMID: [24009598](https://pubmed.ncbi.nlm.nih.gov/24009598/)

## Does noise affect learning? A short review on noise effects on cognitive performance in children

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### Abstract

The present paper provides an overview of research concerning both acute and chronic effects of exposure to noise on children's cognitive performance. Experimental studies addressing the impact of acute exposure showed negative effects on speech perception and listening comprehension. These effects are more pronounced in children as compared to adults. Children with language or attention disorders and second-language learners are still more impaired than age-matched controls. Noise-induced disruption was also found for non-auditory tasks, i.e., serial recall of visually presented lists and reading. The impact of chronic exposure to noise was examined in quasi-experimental studies. Indoor noise and reverberation in classroom settings were found to be associated with poorer performance of the children in verbal tasks. Regarding chronic exposure to aircraft noise, studies consistently found that high exposure is associated with lower reading performance. Even though the reported effects are usually small in magnitude, and confounding variables were not always sufficiently controlled, policy makers responsible for noise abatement should be aware of the potential impact of environmental noise on children's development.

**Keywords:** noise, cognitive performance, cognitive development, children, speech perception, listening comprehension, irrelevant sound effect, classroom acoustics



In everyday life, cognitive tasks are often performed in the presence of task-irrelevant environmental noise. Accordingly, numerous studies on noise effects on performance have been conducted since the middle of the 20th century (for reviews see Hellbrück and Liebl, 2007; Szalma and Hancock, 2011), showing that—depending on characteristics of sounds and tasks—noise of low to moderate intensity may in fact evoke substantial impairments in performance.

Most of these studies were conducted with adults. The present review, however, will focus on studies including children. Children are especially vulnerable to harmful effects of environmental noise, as cognitive functions are less automatized and thus more prone to disruption. We will report findings concerning effects of acute noise on performance in concurrent auditory and non-auditory tasks, as well as effects of chronic noise on children's cognitive development.

### Effects of acute noise on children's performance in auditory tasks

Psychoacoustic studies have consistently shown that children's speech perception is more impaired than adults' by unfavorable listening conditions. The ability to recognize speech under conditions of noise or noise combined with reverberation improves until the teenage years (Johnson, 2000; Wightman and Kistler, 2005; Talarico et al., 2007; Neuman et al., 2010). With stationary noise makers, signal-to-noise ratios (SNRs) have to be 5–7 dB higher for young children when compared to adults in order to achieve comparable levels of identification of speech or nonspeech signals, with adult-like performance reached at about 6 years of age (Schneider et al., 1989; Fallon et al., 2000; Werner, 2007). However, with maskers that vary over time, i.e., with trial-by-trial variation of the maskers' spectral composition (Oh et al., 2001; Hall et al., 2005; Leibold and Neff, 2007) or with fluctuating maskers such as single-talker speech (Wightman and Kistler, 2005), adult-like performance is usually not reached before the age of 10 years. Furthermore, children are less able than adults to make use of spectro-temporal and spatial cues for separation of signal and noise (Wightman et al., 2003; Hall et al., 2005). These findings demonstrate that children are especially prone to *informational* masking, i.e., masking that goes beyond energetic masking predicted by filter models of the auditory periphery.

Studies identified a range of linguistic and cognitive factors to be responsible for children's difficulties with speech perception in noise: concerning the former, children are less able than adults to use stored phonological knowledge to reconstruct degraded speech input. This holds for the level of individual phonemes, as children's phoneme categories are less well specified than adults' (Hazan and Barrett, 2000), but also for the lexical level since children's phonological word representations are more holistic and less segmented into phoneme units. Therefore the probability of successfully matching incomplete speech input with stored long-term representations is reduced (Nittrouer, 1996; Metsala, 1997; Mayo et al., 2003). In addition, young children are less able than older children and adults to make use of contextual cues to reconstruct noise-masked words presented in sentential context (Elliott, 1979). Concerning attention, children's immature auditory selective attention skills contribute to their difficulties with speech-in-noise perception. Children's susceptibility to informational masking has been attributed to deficits in focusing attention on auditory channels centered on signal frequencies, while ignoring nonsignal channels (Wightman and Kistler, 2005). Behavioral and ERP measures from dichotic listening paradigms provide evidence that auditory selective attention improves throughout entire childhood (Doyle, 1973; Pearson and Lane, 1991; Coch et al., 2005; Wightman et al., 2010; Gomes et al., 2012).

Owing to the mediating role of linguistic competence and selective attention, children with language or attention disorders are still more impaired than normally developing children by noise in speech perception tasks (Geffner et al., 1996; Ziegler et al., 2005, 2009). A stronger noise effect is also evident for children tested in their second language when compared to native children (Crandell and Smaldino,



# Autism & Anxiety: Parents seek help for extreme reaction to loud noise

September 5, 2018

*Our 12-year-old son has autism, mild intellectual disability and anxiety attacks so severe that we end up in the emergency room. Loud noises are the worst – for example the school fire alarm, thunderstorms, a balloon popping, fireworks. Any help would be greatly appreciated.*



*This week's "Got Questions?" answer is by Judy Reaven, a clinical psychologist and associate professor of psychiatry and pediatrics at the University of Colorado School of Medicine and Children's Hospital Colorado, in Denver. Dr. Reaven's conducted research on the effectiveness of cognitive-behavioral therapy for anxiety in adolescents with autism, with the support of an [Autism Speaks research grant](#).*

***Editor's note: The following information is not meant to diagnose or treat and should not take the place of personal consultation, as appropriate, with a qualified healthcare professional and/or behavioral therapist.***

Thanks for the great question. It certainly sounds like your family is experiencing a very difficult situation. Anxiety symptoms and reactions are very common in individuals with autism spectrum disorder (ASD). They can interfere with functioning across home, community and school settings.

Although your son's reaction sounds more severe than most, many people with autism struggle with a range of fears, phobias and worries. These can range from a debilitating fear of, say, spiders or the dark to chronic anxiety about making mistakes or being late.

Fortunately, recent research suggests that anxiety in children and adults who have autism is quite treatable. Often, these individuals are helped by the same or similar strategies that work well in treating anxiety in the general population.

These approaches include cognitive behavior therapy, or CBT. Cognitive-behavioral approaches are well-established, evidenced-based treatments that have become the gold standard of psychosocial treatments for anxiety. [My own research](#) and that of my colleagues has demonstrated the helpfulness of modifying cognitive-behavioral approaches to address the special needs of those who have autism.

Where to begin?

You describe a number of fears that may be related to sensory sensitivities. I recommend that you begin by consulting an occupational therapist who can assess whether your son's extreme sensitivities to noises are part of a broader sensory processing disorder. If this is the case, and if your son's fears are exclusively triggered by sensory stimuli, then his symptoms may be best addressed by a sensory-focused intervention. Many occupational therapists who specialize in autism receive special training in this area.

It's common for children with ASD and anxiety to become extremely frightened in response to sensory stimuli. Perhaps – like many individuals with autism – your son also has difficulty telling you what's scaring him. Instead, he may show his fear with extreme avoidance of a situation.

For example, he might refuse to go to school after a fire drill. He might become fearful of birthday parties after being frightened by a balloon that popped unexpectedly. Other signs of extreme distress can include yelling, crying, clinging and general agitation. Because your son may have difficulty communicating, it's important to observe his behavior for these signs of distress. This can help you determine what's triggering his fears.

#### Avoidance versus learning to cope

Many parents go to great pains to protect their children by avoiding agitating situations. This approach is sometimes appropriate and even necessary. However, it denies individuals the opportunity to learn how to manage anxiety-provoking situations on their own.

By helping your son learn to manage his fear, you can prepare him for an unpredictable world so that he can participate in it to the maximum extent possible.

Given the severity of your son's anxiety symptoms, I suggest that you seek professional support in addition to the strategies offered here. Families whose children have milder symptoms of anxiety can try these strategies on their own – seeking professional help if symptoms worsen.

#### Tackling one fear at a time

I suggest making a list of your child's major fears and worries. Try to rank order them from mild to severe. To encourage success, I'd start with a mild-to-moderate fear before taking on his extreme reaction to loud noises.

Key components of a cognitive behavioral approach include introducing coping strategies such as deep breathing and "helpful thoughts" that can help a person manage fearful reactions.

For example, you can teach your son to take deep slow breaths to help manage his body's physical anxiety reactions.

"Helpful thoughts" are statements that your son can say to himself when faced with a situation that makes him anxious. For example, you can coach to your son to say, "This is a loud noise. I don't like it, but I can handle it."

To help your son to learn these strategies, I suggest you model taking deep breaths while repeating a "helpful thought" out loud.

#### Graded exposure

The most important step is to help your son face his fears a little at a time. We call this "graded exposure." For example, explain to your son that the two of you are going to listen to a recording of thunder. The first time, you might play the recording at a soft volume, then gradually increase the volume over time as he demonstrates increased comfort with the sounds.

Or you might try watching a video of a balloon pop – perhaps with the volume off the first time. Then he can watch a real balloon pop while standing some distance away. Over time, he can move closer and closer to the balloon.

After such exercises, you can present him with small rewards for being brave and "facing fears." Remember that even a small act of bravery – such as listening to a recording of thunder for 10 seconds – represents an important step toward handling fears. It deserves to be acknowledged.

Although graded exposure may seem counterintuitive, research indicates that this strategy is the single most effective strategy for getting over a particular fear.

I wish you and your son the very best. Please let us know how you're doing with an email to [GotQuestions@autismspeaks.org](mailto:GotQuestions@autismspeaks.org).

60  
Shares

## Additional Resources & Tools

#### EXPERT OPINION

[Help for Child with Autism & Recurring Behavioral Crises: Part 2](#)

#### EXPERT OPINION

[Parents Seek Help for Son with Autism and Recurring Behavioral Crises](#)




SCIENCE  
NEWS


#### EXPERT OPINION


[Parents Seek Help: Child with Severe Autism Eats Only Sweets](#)





I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

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## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Teresa Smith-Dixon <teresasmithdixon@gmail.com>  
**Sent:** Monday, August 12, 2019 3:36 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Comment regarding B2H  
**Attachments:** Comment B2H 8-11-19.docx

Please see attached letter dated 8-11-19. I will also mail a copy. Teresa Smith-Dixon, resident 2002 Jupiter Way, La Grande, OR 97850.

"Do what love requires" DW

August 11, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, OR 97301

[B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposal Order May 23, 2019.

Chair Beyeler and Members of the Council:

I am very concerned, for several reason, about the Boardman to Hemingway Transmission Project as it is proposed. One of my concerns that I will address in this statement is for the safety of myself and all of the citizens of La Grande if this line is permitted. **This concern is regarding wildfire hazards and also slope instability.**

The proposed route sited to the west of La Grande is placed on a ridge noted to have **instability and high risk for slides**. The geologic study provided by Idaho Power references several studies (below).

Table H-2. USGS Quaternary Faults within 5 Miles of Project by County on page H-12 clearly shows that the project is placed right on an active fault in the West Grande Ronde Valley Fault Zone. In addition, in exhibit H, Geological Hazards and Soil Stability, Table B3: Soils Descriptions, Union County, much of the erosion hazard is rated "severe." Below is part of the report:

## **5.2 La Grande Area Slope Instability**

*As part of our study, we reviewed DOGAMI's open file report: Engineering Geology of the La Grande Area, Union County, Oregon, by Schlicker and Deacon (1971). The study identified several landslides in the areas west and south of La Grande. The majority of the landslide features mapped by Schlicker and Deacon (1971) were similarly mapped as landslides or alluvial fans in Ferns and others (2010). The current SLIDO database uses the feature locations mapped in Ferns and others (2010). While the two map sets generally agree, there are differences in the mapped limits of some landslide and alluvial fan areas, and there is one landslide area in Schlicker and Deacon (1971), near towers 106/3 and 106/4, which is not included in SLIDO or Ferns and others (2010). The Landslide Inventory in Appendix E includes mapped landslide and alluvial fan limits from both SLIDO and Schlicker and Deacon (1971).*

This type of slope instability is not unfamiliar to projects like this. For an example in 2014, Oso, Washington, was the site of a catastrophic mudslide as the result of logging disturbance of the soil upslope from the town combined with significant rainfall. This resulted in 43 fatalities. We must learn from previous mistakes in not heeding the geologists' warnings. The area down slope from the proposed B2H line lies the Grande Ronde Hospital and Clinics, which employs hundreds of people, including me, and is the Critical Access hospital for this region of Oregon. La Grande High School and Central Elementary School are also positioned down slope from the proposed towers. At least 100 homes are positioned down slope of the proposed towers. According to "Engineering Geology of the La Grande Area, Union County, Oregon" maps published by Schlicker, and Deacon (1971), the ENTIRE area of the hillside is deemed a "landslide area" in the La Grande SE quadrangle. **This is not a safe place for a transmission line, or any substantial building and disturbance.**

**Wildfire is also a significant hazard to our community.** An issue very familiar, and an already serious concern, to our family and rural residents in this area. Oregon is ranked 8<sup>th</sup> Most Wildfire Prone state in the United States according to Verisk Wildfire Risk analysis. La Grande is ranked in the top 50 communities in Oregon with the greatest cumulative housing-unit exposure to wildfire as referenced in "Exposure of human communities to wildfire in the Pacific Northwest," by Joe H. Scott, Julie Gilbertson-Day and Richard D. Stratton (available at [http://pyrologix.com/ftp/Public/Reports/RiskToCommunities\\_OR-WA\\_BriefingPaper.pdf](http://pyrologix.com/ftp/Public/Reports/RiskToCommunities_OR-WA_BriefingPaper.pdf)). Finally, the proposed route is in the vicinity of Morgan lake, the highest risk area (#1) in Union County in terms of wildland-urban interface, according to the County's Community Wildfire Protection Plan, August 10, 2005. **It is unthinkable to add more risk for wildfire to my community.**



Cal Fire [California] cites Pacific Gas and Electric equipment and power lines as the cause of numerous wildfires in the state in the last 2 years. This includes the Camp Fire in Butte County (2018), Tubbs Fire in Napa/Sonoma Counties (2017), Witch Fire in San Diego (2007), Valley Fire in Lake/Napa/Sonoma Counties (2015), Nuns Fire in Sonoma County (2017), which were all attributed to transmission.

The Boardman To Hemingway Transmission Line Project proposal places lines about 2000 feet or less than half a mile from the La Grande city limits, including medium density housing within the city as well as Grande Ronde Hospital. If a line from this proposed route were to spark a fire, La Grande residents would have little time to react. According to National Geographic, wildfires can move as fast as 6.7 mph in forests and 14 mph in grasslands. A fast-moving fire starting at the B2H lines could move to residential areas of La Grande and HOSPITAL in 10 minutes. **This is frightening and an unacceptable risk for myself and neighbors!**

The current proposal for a Boardman to Hemingway transmission line does not adequately address the issue of landslides, basically by stating it will be mitigated somehow when the time comes to build. The proposal offers no analysis of wildfire risk, which is an unacceptable omission. All of the routes proposed are unsafe and create an unacceptable risk to the citizens of La Grande.

**The Council should DENY the request for a site certificate.**

Sincerely,

---

Name: Teresa Smith-Dixon

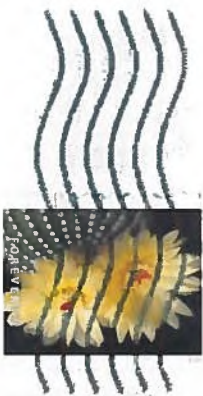
Address: 2002 Jupiter Way  
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Ms. Teresa Smith-Dixon  
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PORTLAND OR 972

17 AUG 2019 PM 6 L



Energy Facilities Siting Council  
c/o Kellan Tardewether, senior siting Analyst.  
Oregon Dept. of Energy  
558 Capitol st NE  
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**RECEIVED**

AUG 19 2019

DEPARTMENT OF ENERGY

97301-374299





August 11, 2019

Energy Facilities Siting Council  
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*As part of our study, we reviewed DOGAMI's open file report: Engineering Geology of the La Grande Area, Union County, Oregon, by Schlicker and Deacon (1971). The study identified several landslides in the areas west and south of La Grande. The majority of the landslide features mapped by Schlicker and Deacon (1971) were similarly mapped as landslides or alluvial fans in Ferns and others (2010). The current SLIDO database uses the feature locations mapped in Ferns and others (2010). While the two map sets generally agree, there are differences in the mapped limits of some landslide and alluvial fan areas, and there is one landslide area in Schlicker and Deacon (1971), near towers 106/3 and 106/4, which is not included in SLIDO or Ferns and others (2010). The Landslide Inventory in Appendix E includes mapped landslide and alluvial fan limits from both SLIDO and Schlicker and Deacon (1971).*

This type of slope instability is not unfamiliar to projects like this. For an example in 2014, Oso, Washington, was the site of a catastrophic mudslide as the result of logging disturbance of the soil upslope from the town combined with significant rainfall. This resulted in 43 fatalities. We must learn from previous mistakes in not heeding the geologists' warnings. The area down slope from the proposed B2H line lies the Grande Ronde Hospital and Clinics, which employs hundreds of people, including me, and is the Critical Access hospital for this region of Oregon. La Grande High School and Central Elementary School are also positioned down slope from the proposed towers. At least 100 homes are positioned down slope of the proposed towers. According to "Engineering Geology of the La Grande Area, Union County, Oregon" maps published by Schlicker, and Deacon (1971), the ENTIRE area of the hillside is deemed a "landslide area" in the La Grande SE quadrangle. **This is not a safe place for a transmission line, or any substantial building and disturbance.**

**Wildfire is also a significant hazard to our community.** An issue very familiar, and an already serious concern, to our family and rural residents in this area. Oregon is ranked 8<sup>th</sup> Most Wildfire Prone state in the United States according to Verisk Wildfire Risk analysis. La Grande is ranked in the top 50 communities in Oregon with the greatest cumulative housing-unit exposure to wildfire as referenced in "Exposure of human communities to wildfire in the Pacific Northwest," by Joe H. Scott, Julie Gilbertson-Day and Richard D. Stratton (available at [http://pyrologix.com/ftp/Public/Reports/RiskToCommunities\\_OR-WA\\_BriefingPaper.pdf](http://pyrologix.com/ftp/Public/Reports/RiskToCommunities_OR-WA_BriefingPaper.pdf)). Finally, the proposed route is in the vicinity of Morgan lake, the highest risk area (#1) in Union County in terms of wildland-urban interface, according to the County's Community Wildfire Protection Plan, August 10, 2005. **It is unthinkable to add more risk for wildfire to my community.**

Cal Fire [California] cites Pacific Gas and Electric equipment and power lines as the cause of numerous wildfires in the state in the last 2 years. This includes the Camp Fire in Butte County (2018), Tubbs Fire in Napa/Sonoma Counties (2017), Witch Fire in San Diego (2007), Valley Fire in Lake/Napa/Sonoma Counties (2015), Nuns Fire in Sonoma County (2017), which were all attributed to transmission.

The Boardman To Hemingway Transmission Line Project proposal places lines about 2000 feet or less than half a mile from the La Grande city limits, including medium density housing within the city as well as Grande Ronde Hospital. If a line from this proposed route were to spark a fire, La Grande residents would have little time to react. According to National Geographic, wildfires can move as fast as 6.7 mph in forests and 14 mph in grasslands. A fast-moving fire starting at the B2H lines could move to residential areas of La Grande and HOSPITAL in 10 minutes. **This is frightening and an unacceptable risk for myself and neighbors!**

The current proposal for a Boardman to Hemingway transmission line does not adequately address the issue of landslides, basically by stating it will be mitigated somehow when the time comes to build. The proposal offers no analysis of wildfire risk, which is an unacceptable omission. All of the routes proposed are unsafe and create an unacceptable risk to the citizens of La Grande.

**The Council should DENY the request for a site certificate.**

Sincerely,

Teresa Smith-Dixon

Name: Teresa Smith-Dixon

emailed 8/12/19

Address: 2002 Jupiter Way  
La Grande, OR. 97850



## **TARDAEWETHER Kellen \* ODOE**

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**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:53 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.38.19.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter signed by me and 54 other residents of La Grande expressing our concerns regarding the B2H Project and we request that EFSC deny the Site Certificate.

I have also sent a bound copy of this material by the US Postal Service.

Sincerely,

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850

August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the usage of the "Local Streets" <sup>1</sup> specifically the Modelaire-Hawthorne Loop) <sup>2</sup>, hereafter referred to as the "loop", of La Grande to access the site entrance. This residential "loop" was constructed without sidewalks for a new development around the early 1960s.

According to OAR 345-022-0110, Public Services (pg. 5. April 2017) "The applicant...must address all permanent and temporary impacts of the facility on housing, traffic, safety, police and fire protection, health care and schools." <sup>3</sup>

My impression from reviewing the application Page 17 <sup>4</sup> is that the applicant has not fully examined the final portion of the intended route nor does it fully recognize or address the need for traffic mitigation. This "loop" is the only access to/from thirty-six houses to the rest of the city. The area to the north of the "loop" is occupied by the Grande Ronde Hospital and Medical Clinic. Two blocks to the east is located the local high school and a grade school. <sup>2</sup>

In June of 2016, the Grande Ronde Hospital petitioned the City to have a conditional use for a parking lot expansion project next to Hawthorne. The Conditional Use Permit was approved subject to the Condition of Approval that "No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to residential standards and is not designed to support commercial traffic." <sup>5</sup>



The La Grande Director of Public Works, Kyle Carpenter, provided information regarding the widths for the streets in question. The two streets range from 33 feet to 37 feet in width with no sidewalks. I personally measured the area where the unpaved stem of Hawthorne leaves the "loop" to go up the hill. At the junction it measures 32 feet curb cut to curb cut and narrows to 18-21 feet in width as it goes around the corner up the hill. 6 The Public Works Director also provided pictures of the mapping system showing the existing utilities located in the "loop". 7-8. It should also be noted that from the entrance to the "loop" at Sunset Drive to the entrance of the site the road has a 16% grade.

Attachment U2 9 from the application shows an "Aerial Lift Crane to be Used During Construction" and the Transportation and Traffic Plan on page 19 10 lists a number of other vehicles anticipated to be used. Article 6.6 — Public Street Standards for the City of La Grande Section 6.6.002 states that "Collector Streets are designed to withstand normal trucks of an HS20 loading. Larger trucks are to utilize Arterial Streets where at all possible." 11 The majority of vehicles listed on page 19 exceed that limit and would be using a Local Street in addition to Arterial and Collector Streets. According to the Public Works Director the two streets in the "loop" were designed as Local Streets for residential use, able to accept the pressures of HS20 for the purpose of an occasional need such as a weekly garbage truck or an emergency vehicle but for no more than 5% of the time. The paving construction of these over 50 year old streets in the "loop" was not designed for repetitive use by vehicles heavier than a normal car. These streets in the "loop" have not been repaved, only patched when necessary, since they were first constructed.

The application does not address the "loop" specifically, but 3.1.2 (pg. 19) 10 and Table 6 (pg.17) 12 of the Transportation and Traffic Plan indicate there would be numerous vehicles using this route. Not knowing exactly just which vehicles would be on the "loop" daily but making a conservative estimate of 50 round trips (100 single) it would be a constant parade with one truck every 7.2 minutes. This is unacceptable for numerous reasons including constant excessive noise.

Not only would weight of the vehicles be a problem but the narrowness of the "loop" streets and the ninety degree blind curves that would have to be executed would be either impossible or extremely dangerous considering the turning radius for many of these large vehicles. The

already dangerous situation for a number of driveways that exit onto these "loop" streets at blind curves would be exacerbated. 13-14

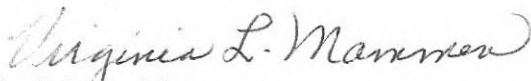
When considering only the traffic and safety issues listed above, the use of the "loop" as a part of the route for Idaho Power seems to be not only dangerous for the residents but unconscionable and irresponsible for Idaho Power to use such streets that are currently primarily for the neighborhood for walking (children to school, all ages for physical training), driving, or biking. I fear there are standards that are either not being considered or they are intentionally being ignored. There should be some common sense, courtesy and respect for the impact this project would impose on any neighborhood.

Finally, La Grande Ordinance Number 3077, which adopted Oregon State Traffic Laws by reference, states in Section 17 page 8 "It shall be unlawful for any person, firm or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes." Neither Modelaire/Hawthorne Loop nor Sunset Drive are posted as truck routes. 15-16

A site review and traffic plan must be completed prior to the cite certificate being issued and not 90 days prior to construction as stated.

For the above reasons I oppose the usage of the proposed route for the construction of the B2H transmission line.

Sincerely,

  
Virginia L. Mammen  
405 Balsa  
La Grande, Oregon. 97850

gmammen@eoni.com



**TABLE 1  
 STREET STANDARDS**

Functional Classification	ADT Volume	Speed (mph)	# of Travel Lanes	Travel Lane Width	Turn Lane or Median Width	Bike Lanes	Min. Bike Lane Width	On-Street parking
Downtown Arterial	10,000	20	2-3	11'	11'			both sides
Arterial	10,000	40-55	2-5	12'	4-14'	optional <sup>4</sup>	5'	none
Major Collector	2,000 - 10,000	25-45	2-3	11'	12'	required	5'	one or both sides
Minor Collector	1,000 - 2,000	25-35	2	11'	none	Optional <sup>5</sup>	5'	one or both sides
Local Street	0 - 1,000	15-25	2	10'	none	none	none	one or both sides

Functional Classification	Sidewalks	Min. Sidewalk Width	Planting Strip Width <sup>1</sup>	Total Paved Width <sup>2</sup>	Total ROW Width <sup>3</sup>	Private Access Spacing
Downtown Arterial	required	12'	3'6" <sup>6</sup>	49'	80'	200'
Arterial	required	5'	8'	36'-72'	80'-102'	200' - 400'
Major Collector	required	5'	8'	52'-60'	62'-90'	150' - 300'
Minor Collector	required	5'	8'	30'-48'	60'-78'	75' - 150'
Local Street	required	5'	8'	28'-36'	40'-66'	Each Lot

<sup>1</sup>A portion of the required planting strip width may be used instead as additional sidewalk width or reduced right of way, as appropriate.

<sup>2</sup>The minimum of the paved width was calculated with the following assumptions:

Arterials: Two (2) travel lanes, four foot (4') median divider, no center turn lane, no bike lanes.

Major Collectors: Two (2) travel lanes, two (2) bike lanes, no center turn lane, parking on one (1) side.

Minor Collectors: Two (2) travel lanes, parking on one (1) side of street, no bike lanes.

Local Streets: Two (2) travel lanes, parking on one (1) side of street.

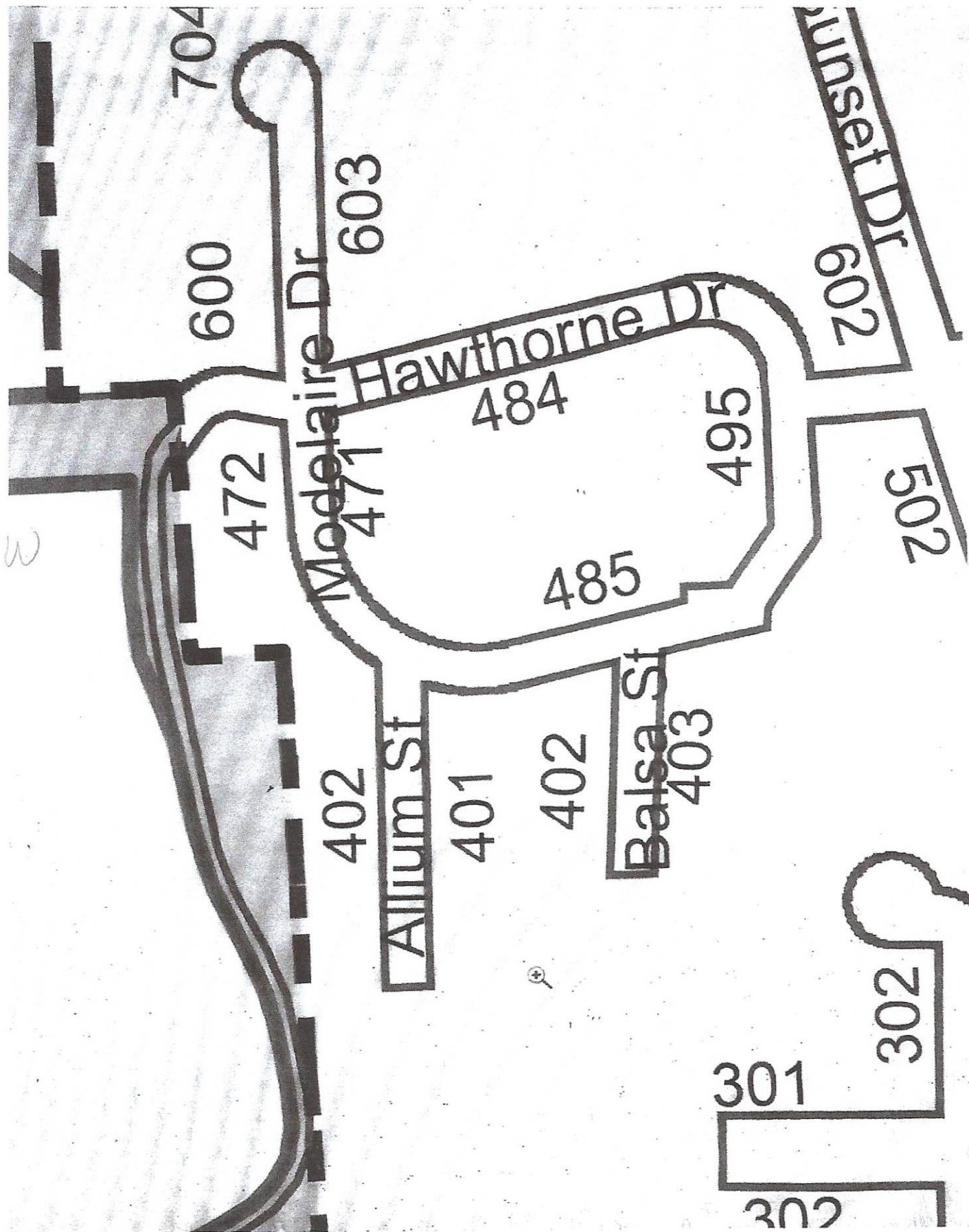
The maximum paved width for each street was calculated assuming the inclusion of all required and optional facilities. Minimum paved widths for each street are as required in Section 6.2.005 of this Code.

<sup>3</sup>These right-of-way width ranges are for new streets.

<sup>4</sup>Bike lanes should be provided on Arterials unless more desirable parallel facilities are designated and designed to accommodate bicycles.

<sup>5</sup> Bike lanes should be provided on Minor Collectors where traffic volumes or other factors warrant. Otherwise, Minor Collectors should be designed and designated as shared roadway facilities with wide outside travel lanes of 14' on important bike routes.

N



5



## Public Services

### OAR 345-022-0110

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## Waste Minimization

### OAR 345-022-0120

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## Need for a Facility

### OAR 345-023-0005

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## Specific Standards for Wind Facilities

### OAR 345-024-0010 and 345-024-0015

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## Specific Standards for Transmission Lines

### OAR 345-024-0090

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





Idaho Power Responses to Comments and Requests for Additional Information on the B2H APASC  
from the City of La Grande  
Compiled by ODOE. RAI's from the City of La Grande and Responses from IPC

U	U- Public Services include utilities such as road systems, water, sanitation services, power, and other amenities necessary for the construction.	Ordinance #2912, Series 1997 gives the City jurisdiction and control on all City street rights-of-way and Ordinance #3077, Series 2009, establishes the process and requirements for permits and licenses for uses of the streets that are not normal uses and may result in damages.	proposed helipad is a necessary supporting facility.	<p>To address the City's concerns regarding traffic and road use within the city's limits, Idaho Power has added the following proposed conditions to Exhibit K:</p> <p><i>Land Use Condition 9: Prior to construction in Union County, the site certificate holder shall complete the following to address traffic impacts in the county:</i></p> <p><i>a. The site certificate holder shall finalize, and submit to the department for its approval, a final county-specific transportation and traffic plan. The protective measures described in the draft Transportation and Traffic Plan in ASG Exhibit U, Attachment U-2, shall be included and implemented as part of the final county-specific plan, unless otherwise approved by the department;</i></p> <p><i>b. The site certificate holder shall work with the Union County Road Department and the City of La Grande Public Works Department to identify concerns related to Project construction traffic; and</i></p> <p><i>c. The site certificate holder shall develop traffic control measures to mitigate the effects of Project construction traffic.</i></p> <p><i>Land Use Condition 26: During construction in Union County, the site certificate holder shall conduct all work in compliance with the Union County-specific</i></p>
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#### IV. CONCLUSIONS

Based on the Findings of Fact above, the Planning Commission concludes that the application meets the requirements established in LDC Articles 8.5 and other applicable codes and Ordinances.

#### V. ORDER AND CONDITIONS OF APPROVAL

Based on the conclusions above, the Planning Commission approves the Conditional Use Permit as requested, subject to the following Conditions of Approval:

1. No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to a residential standards and is not designed to support commercial traffic.
2. Any existing driveway curb cuts along Hawthorn Drive bordering GRH's property, that are not used for residential purposes, shall be removed and replaced with City standard improvements that exists adjacent to such areas.
3. There is a storm sewer line extending through the project area that shall to be protected. Any improvements that may affect the storm sewer line shall be reviewed and approved by the Public Works Director.

#### VI. STANDARD CONDITIONS OF APPROVAL FOR LAND USE APPLICATIONS

1. **Revisions to a Valid Conditional Use Permit:** Any variations, alterations, or changes in a valid Conditional Use Permit requested by the deed holder shall be considered in accordance with the procedures of the Land Development Code as though a new Conditional Use Permit were being applied for.
2. **Public Works Standards:** Where a development involves work within the public right-of-way, a Right-of-Way Permit shall be obtained from the Public Works Department in advance of commencing with any work in the right-of-way. All improvements within the public right-of-way shall be in conformance with the most recent adopted City of La Grande "Engineering Standard Drawings and Specifications for Construction Manual."
3. **Building Permits:** The City of La Grande Building Department shall be contacted early in the process and in advance of development to coordinate and obtain required building, plumbing, electrical and/or mechanical permits. All required permits shall be acquired in advance of construction.

#### VI. OTHER PERMITS AND RESTRICTIONS

The applicant and property owner is herein advised that the use of the property involved in this application may require additional permits from the City of La Grande or other local, State or Federal Agencies.

The City of La Grande land use review, approval process and any decision issued does not take the place of, or relieve the applicant of responsibility for acquiring such other permits, or satisfy any restrictions or conditions thereon. The land use decision herein does not remove, alter, or impair in any way the covenants or restrictions imposed on this property by deed or other instrument.

The land use approvals granted by this decision shall be effective only when the rights granted herein have been exercised and commenced within one (1) year of the effective date of the decision. In case such right has not been exercised and commenced or an extension obtained, the approvals granted by this decision shall become null and void. A written request for an extension of time shall be filed with the Planning Department at least thirty (30) days prior to the expiration date of the approval.



Virginia Mammen &lt;4gmammen@gmail.com&gt;

**Modelaire Roadway Specifications**

3 messages

**Kyle Carpenter** <KCarpenter@cityoflagrande.org>  
To: "gmammen@eoni.com" <gmammen@eoni.com>

Fri, Jul 12, 2019 at 1:51 PM

I have attached a couple pictures of our mapping system that will give you a sense of where existing utilities are in Modelaire and Hawthorne. As for the widths of the roadways, I took measurements in multiple places, and found the following:

- Modelaire Drive (F Avenue) between Sunset Blvd and Hawthorne Drive is approximately 33 feet wide with a grade of about 5 Percent.
- Hawthorne Drive is approximately 32 feet wide at the bottom near the intersection of Modelaire/F Avenue and widens to about 34 feet where it intersects Modelaire at the top of the hill. The grade heading up hill is approximately 15.5 Percent.
- Modelaire Drive is generally 36 feet wide with some minor variability generally less than a foot (35' to 37'). On the southernmost segment of the roadway where the majority of the elevation gain is observed the grade is approximately 16 Percent.

Let me know if there are any other specifications of these roadways that you are interested in that I have missed. Have a great weekend and thanks for the treats, the guys were very appreciative.

*Kyle Carpenter, PE*

**Public Works Director**

**City of La Grande**

**Public Works**

Ph: (541) 962-1325

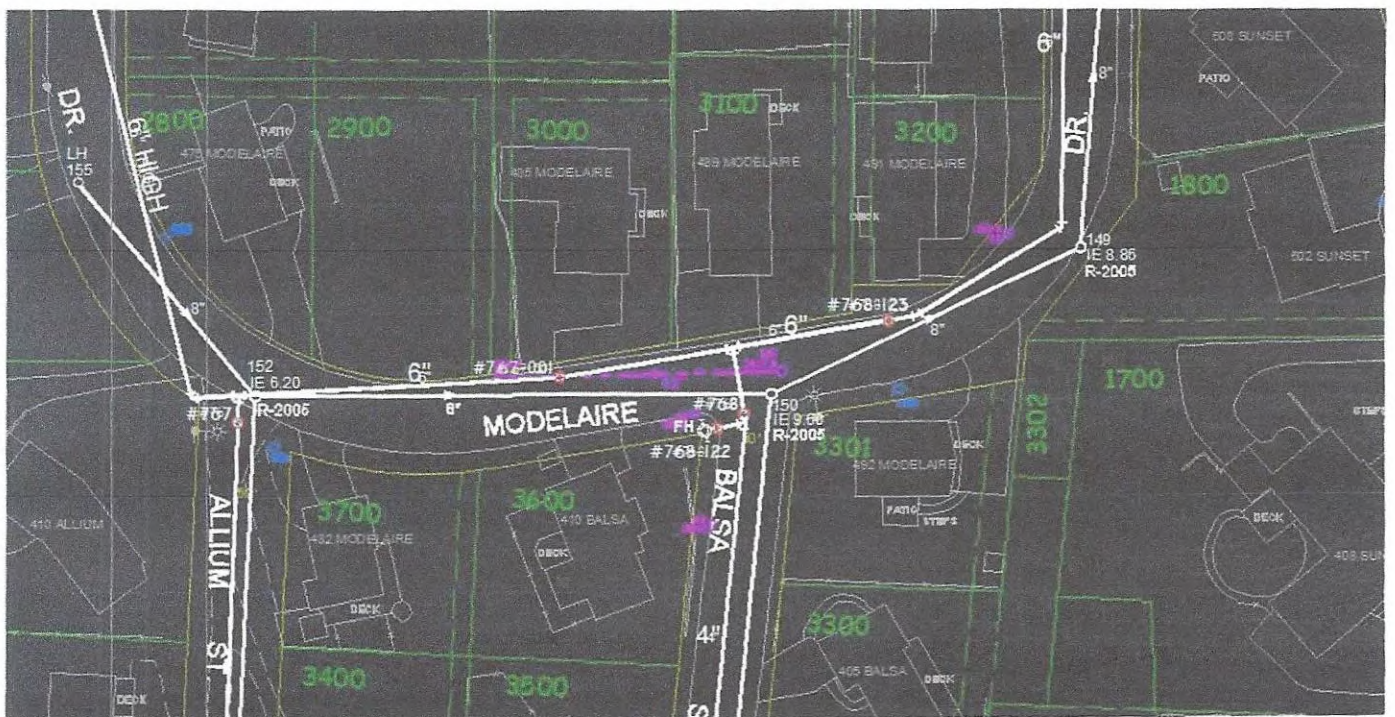
Fax: (541) 963-4844

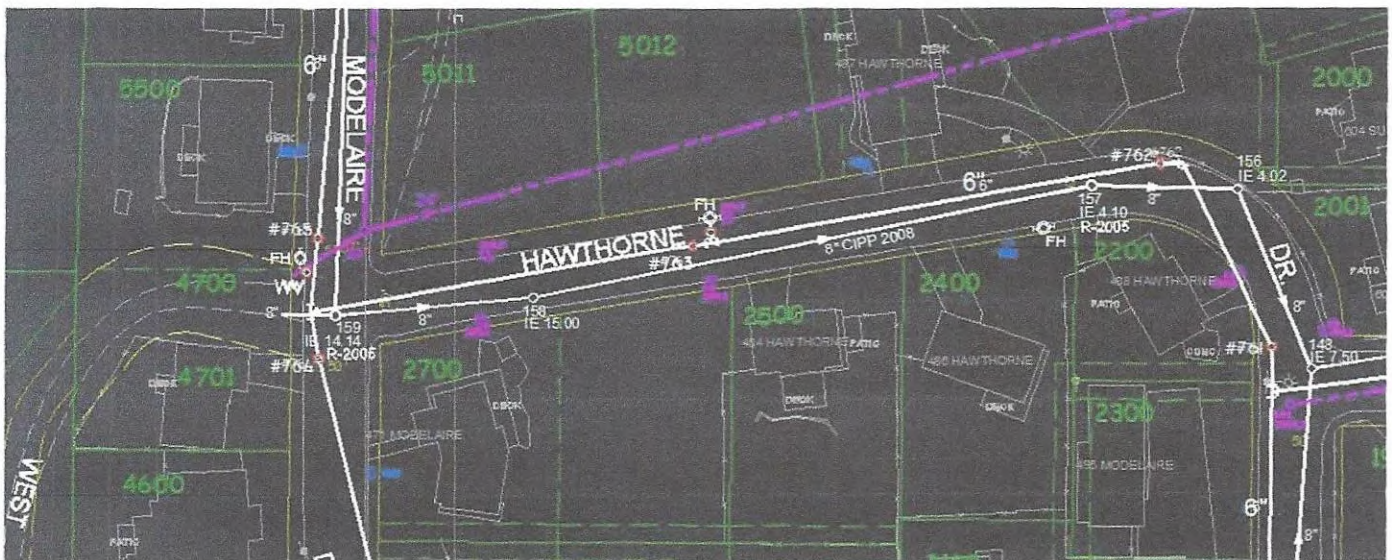
**2 attachments**

**Hawthorne.jpg**  
150K

**Modelaire.jpg**  
120K









attachment U2

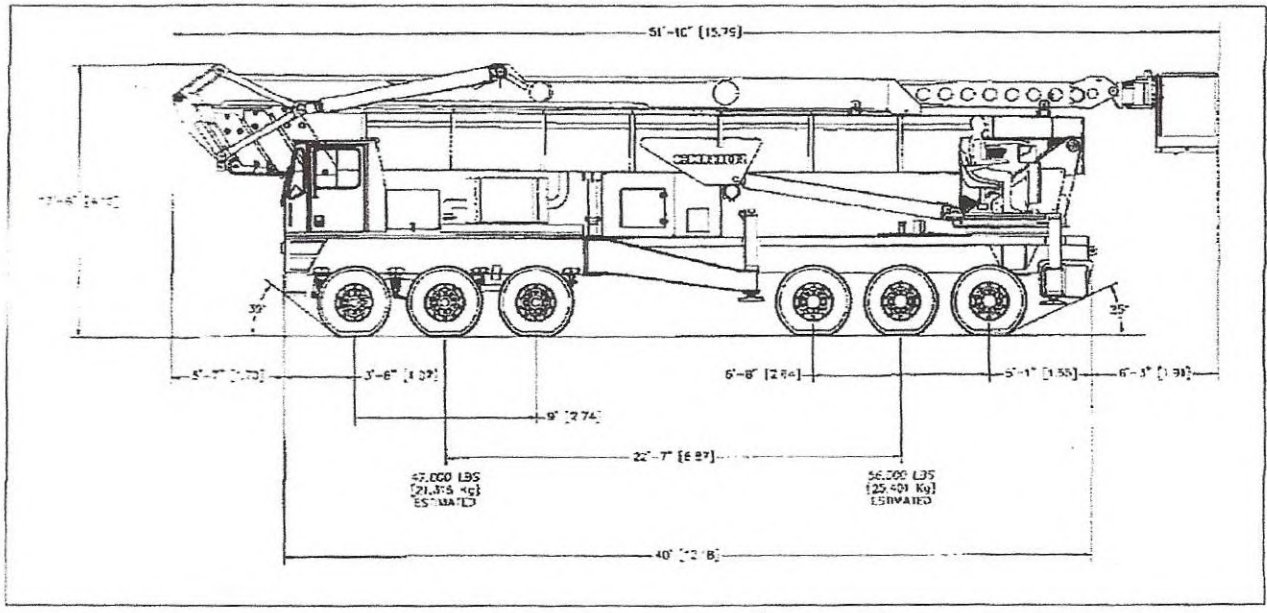


Figure 2. Example Aerial Lift Crane to be Used During Construction (Roadable Length 52 Feet; Width 8 Feet 6 Inches)

The following is a summary of anticipated equipment to be used for each transmission-line construction activity.

- Survey work: pickup trucks or ATVs.
- Timber removal: pickup trucks, feller bunchers, dump trucks, wood chippers.
- Road construction: pickup trucks, bulldozers, motor graders, and water trucks.
- Hole digging, installation of directly embedded structures, or foundation installation: pickup trucks, 2-ton trucks, digger derrick trucks, hole diggers, bulldozers, concrete trucks, water trucks, cranes, hydro cranes, wagon rock drills, dump trucks, and front-end loaders.
- Hauling lattice steel members, tubular poles, braces, and hardware to the structure sites: steel haul trucks, carry alls, cranes, and forklifts.
- Assembly and erection of structures: pickup trucks, 2-ton trucks, carry alls, cranes, and a heavy lift helicopter.
- Wire installation: pickups, wire reel trailers, diesel tractors, cranes, 5-ton boom trucks, splicing trucks, three drum pullers, single drum pullers, tensioner, sagging dozers, carry-alls, static wire reel trailers, bucket trucks, and a light duty helicopter.
- Final cleanup, reclamation, and restoration: pickup trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, hydro-seed truck, and water trucks.

The highest level of traffic will be when the wire stringing operations begin while several other operations are occurring at the same time, which will likely include ROW clearing, installing foundations, hauling steel, and assembling and erecting structures. For the station work, the highest level of traffic will be during site grading and foundation installation. For the communication station sites, the highest level of traffic will be during grading and site preparation.

Detailed estimates of trips generated by transporting Project construction equipment will be provided by the construction contractor prior to construction.

### **3.1.3 Traffic Related to Timber Removal**

In forested areas, the Project will require removal of timber from the Project ROW and for construction and improvement of access roads. Specific timber harvest plans have not been finalized. Logs from timber clearing may be transported to nearby sawmills. Decisions regarding transportation routes for harvested timber will be made following completion of a timber harvest plan, and the number of log truck trips will be estimated when the timber harvest plan has been finalized. Logging slash will remain onsite if possible. For additional discussion regarding removal of timber in forested areas, see Exhibit K, Attachment K-2, ROW Clearing Assessment.

### **3.1.4 Impacts to V/C Ratios**

Based on the estimated trip generation numbers in Tables 4 and 6, a maximum of approximately 1,294 daily one-way vehicle trips are expected within any one construction spread. To facilitate traffic and other analyses, the two construction spreads are divided into smaller sections based on similar construction windows and seasonal weather restrictions. Not all construction sections will have the same number of concurrent construction activities, depending on how the construction contractor sequences and executes the Project. Some sections will have fewer daily vehicle trips. For the purposes of the traffic analysis, the spreads are divided into five sections with multi-use areas that could have additive traffic impacts. The sections are assumed to have approximately equal levels of activity. The 1,294 daily one-way trips per spread divided over five sections of more concentrated traffic results in 259 daily one-



## **ARTICLE 6.6 – PUBLIC STREET STANDARDS**

### **SECTION 6.6.001 - PURPOSE**

Upon the request of the La Grande City Council, a variety of street design standards have been reviewed and are now incorporated in the Land Development Code.

### **SECTION 6.6.002 - CLASS I IMPROVEMENT STANDARDS**

This classification will cover those streets that are designed to meet the standards for an expected life of twenty (20) years or more. The attached drawings shall be the minimum standard for those streets in this classification. All streets designated as Federal Aid Urban Streets (F.A.U.) shall be constructed under these design standards. Streets in this designation shall be constructed with sidewalks when at all possible in an effort to increase pedestrian safety. Collector streets are designed to withstand normal trucks of an HS 20 loading. Larger trucks are to utilize Arterial streets where at all possible. This level of development shall be the ultimate goal for all streets within the City of La Grande.

Possible means of financing available for this Class shall be methods A, B, C, D, E, F, G, and H in Section 6.6.006.

#### **A. Advantages**

1. The construction life is extended to a period above other City standards.
2. The visible aesthetics in relationship to having curbs and a blacktop surface with landscaping or concrete driveways and a sidewalk is generally appealing to the public.
3. Easy maintenance for the Public Works Department for cleaning and minor repair.
4. Storm sewer drainage is confined within the bounds of the curbs during minor flooding periods.
5. Parking is restricted to a solid barrier, that being the curb; this restricts parking in the area on the back side of the curb and confines travel to the street surface.
6. Defined areas for possible cross walks, signs, power poles, and other utilities that are restricted to the outside areas behind the curbs.
7. It allows for a wide range of financing methods and is to City standards for a ten (10) year Bancroft bonding.
8. Provides a dust free surface.

#### **B. Disadvantages**

1. The extreme high level of cost that is incurred with this type of development.

### **SECTION 6.6.003 - CLASS II IMPROVEMENT LEVEL**

Streets constructed in this classification shall be constructed to the same standards as Class I Streets with the exception of the form of drainage system. These streets shall meet the standards as shown on the attached drawing. This level of construction shall be only utilized in substitution for Class I Streets when it is determined by the City Council at the recommendation of the City Engineer or Engineering Superintendent, that an adequate drainage system cannot be installed for a Class I Street.

Table 6. Construction Vehicle Trips per Day per Construction Spread

Construction Crew Type	Construction Vehicles					
	Light Construction Vehicles			Heavy Construction Vehicles		
	Number of Pickups/ Mechanic Trucks (per day)	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)	Number of Other Vehicles	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)
Substation Construction	20	2	40	5	2	10
ROW Clearing	9	4	36	5	4	20
Roads/ Pad Grading	9	4	36	9	2	18
Foundations	9	2	18	5	8	40
Tower Lacing (assembly)	27	2	54	0	0	0
Tower Setting (erection)	20	2	40	0	0	0
Wire Stringing	9	4	36	9	4	36
Restoration	3	2	6	0	0	0
Blasting	5	4	20	0	0	0
Material Delivery	20	8	160	12	2	24
Mechanic and Equipment Mgmt.	5	6	30	0	0	0
Refueling	0	0	0	5	4	20
Dust Control	0	0	0	5	4	20
Construction Inspection	5	8	40	0	0	0
Concrete Testing	5	4	20	0	0	0
Environmental Compliance	9	6	54	0	0	0
Surveyors	5	3	30	0	0	0
<b>Totals</b>	—	—	<b>620</b>	—	—	<b>188</b>



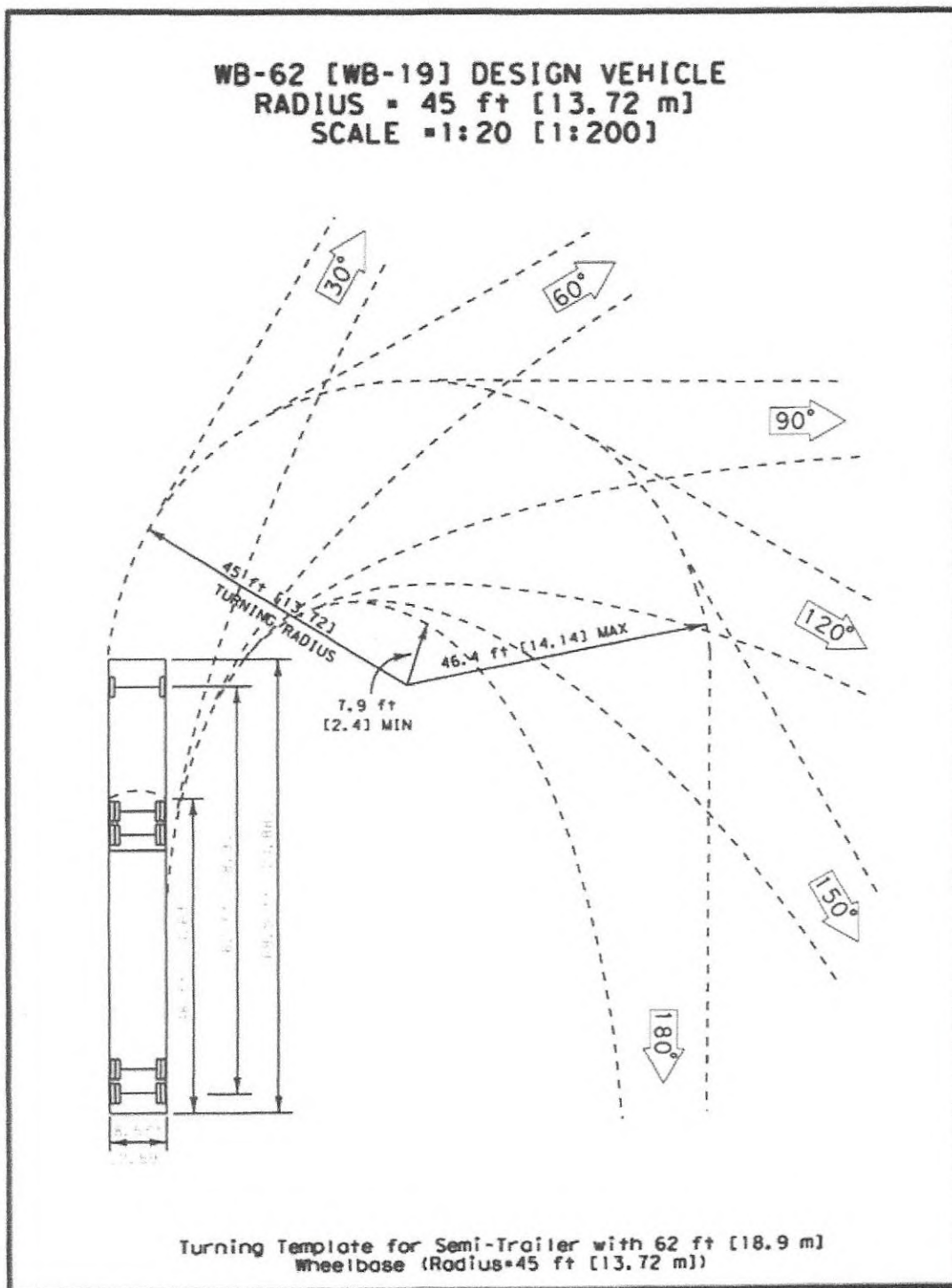
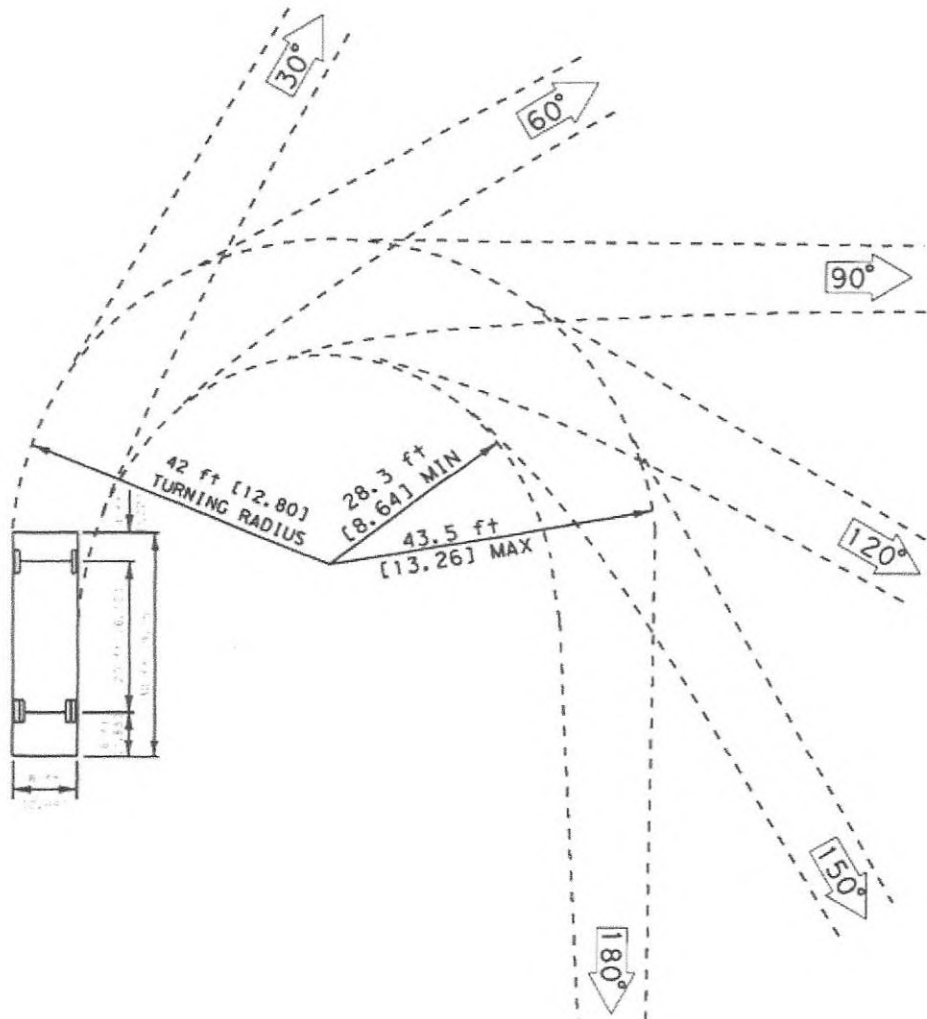


Figure 7-4. Turning Template for Semi-Trailer with 62 ft [18.9 m] Wheelbase, (not to scale). Click [here](#) to see a PDF of the image.

**SINGLE UNIT (SU) TRUCK DESIGN VEHICLE**  
**TURNING RADIUS = 42 ft [12.80 m]**  
**SCALE = 1:20 [1:200]**



Turning Template for Single Unit Trucks or Buses



Exhibit 15

**CITY OF LA GRANDE  
ORDINANCE NUMBER 3077  
SERIES 2009**

**AN ORDINANCE CONTROLLING VEHICULAR AND PEDESTRIAN TRAFFIC, PARADES  
AND PROCESSIONS AND ISSUANCE OF PERMITS; PROVIDING PENALTIES; AND  
REPEALING ORDINANCE NUMBER 2845, SERIES 1993; ALL AMENDING ORDINANCES  
AND ALL OTHER ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HERewith;  
AND DECLARING AN EFFECTIVE DATE**

THE CITY OF LA GRANDE ORDAINS AS FOLLOWS:

**Section 1.** This Ordinance may be cited as the City of La Grande Uniform Traffic Ordinance.

**Section 2.** APPLICABILITY OF STATE TRAFFIC LAWS.

Oregon Revised Statutes, Chapter 153, and the Oregon Vehicle Code, ORS Chapter 801 and 822, as now constituted, are adopted by reference. Violation of an adopted provision of those chapters is an offense against the City.

**Section 3.** DEFINITIONS

In addition to those definitions contained in the Oregon state Motor Vehicle Code, the following words or phrases, except where the context clearly indicates a different meaning, shall mean:

a. Alley

A street or highway primarily intended to provide access to the rear or side of lots or buildings in urban areas and not intended for through vehicular traffic.

b. Bicycle

A bicycle is a vehicle that:

1. Is designed to be operated on the ground on wheels;
2. has a seat or saddle for use of the rider;
3. is designed to travel with not more than three (3) wheels in contact with the ground;
4. is propelled exclusively by human power; and,
5. has every wheel more than fourteen inches (14") in diameter or two (2) tandem wheels, either of which is more than fourteen inches (14") in diameter.

c. Bicycle Lane

That part of the highway, adjacent to the roadway, designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

d. Bicycle Path

A public way, not part of a highway, which is designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

e. Block

The part of one side of a street lying between the two (2) nearest cross streets.

f. Central Business District

a. City Regulation of Special Movement of Oversized Load

The applicant shall submit an application to the City Manager or designee, showing the terminal points of the purported movement; the proposed route; the nature of the movement requested, including the weight and dimensions of the vehicle, load, machine, building, or structure to be moved; the time, date and duration of the proposed movement.

b. Special Movement Permit

A permit shall be required to move any vehicle, structure, or load on, or to access a street when, after preparation for movement, the vehicle, structure or load exceeds fourteen feet (14') in height, requires the use of guy wires, or could result in the blockage of a street. An approved application may serve as a permit, and a copy of the approved application shall be provided to the applicant.

**Section 17. TRUCK ROUTES**


- a. It shall be unlawful for any person, firm, or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes.
- b. Any vehicle with a gross weight over 26,000, pounds specifically picking up deliveries or making deliveries to any business or residence located on a street that is not a truck route will be exempted if the vehicle is driven from the truck route to the destination in the shortest, most direct, and safest route.
- c. The use of Jacob brakes shall not be allowed within the city limits of La Grande, Oregon.
- d. Truck routes will be posted as follows:
  1. Walnut street north from the city limits to C Avenue;
  2. C Avenue east from Walnut Street to Gekeler Avenue;
  3. Gekeler Avenue east to the city limits;
  4. 12th street south from Gekeler Avenue to the city limits;
  5. 2nd Street south from the city limits to Adams Avenue;
  6. Monroe Avenue east from Spruce Street to Highway 82;
  7. Jackson Avenue east from Spruce Street, and
  8. Spruce Street south from the city limits to Monroe.

**Section 18. IMPOUNDMENT AND DETENTION OF VEHICLES**

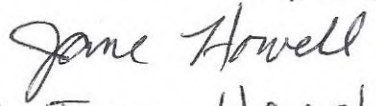
- a. Whenever a vehicle is placed in a manner or location that constitutes an obstruction to traffic or a hazard to public safety, a police officer or enforcement officer shall order the owner or operator of the vehicle to remove said vehicle. If the vehicle is unattended, the officer or enforcement officer may cause the vehicle to be towed and stored at the owner's expense. The owner shall be liable for the costs of towing and storing, notwithstanding that the vehicle was parked by another or that the vehicle was initially parked in a safe manner but subsequently became an obstruction or hazard.

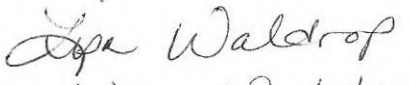


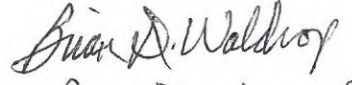
I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

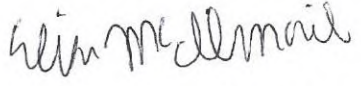
SIGNATURE   
PRINTED NAME James E. Howell II  
ADDRESS 482 Modelaire Dr

EMAIL jhowell2@frontier.com

SIGNATURE   
PRINTED NAME Jane Howell  
ADDRESS 482 Modelaire DR  
EMAIL d.janehowell@gmail.com

SIGNATURE   
PRINTED NAME Lisa Waldrop  
ADDRESS 475 Modelaire Dr.  
EMAIL ldjw62@gmail.com

SIGNATURE   
PRINTED NAME BRIAN D. WALDROP  
ADDRESS 475 MODELAIRES DR.  
EMAIL bdwaldrop58@gmail.com

SIGNATURE   
PRINTED NAME EUSE MCILMAIL  
ADDRESS 476 MODELAIRES DR.  
EMAIL mcilmail154@hotmail.com


I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

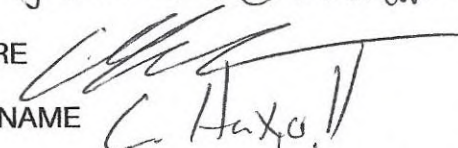
  
Jessie Huxell  
472 Modelaire Dr. LaGrande OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

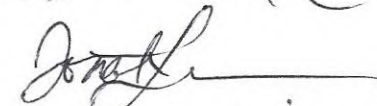
  
C. Huxell  
472 Modelaire Dr. LG, OR 97850  
CHRIS Huxell @ EMAIL. Com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Jonah Lindeman  
702 Modelaire LaGrande  
jlindeman@rpi.ag

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

Marie Skinner  
Marie Skinner  
208 3rd LaGrande  
marieskinner@hotmail.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

Blake Bars  
Blake Bars  
1101 G Ave La Grande  
blakebars@gmail.com



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*D. Dale Mammen*

PRINTED NAME

D. Dale Mammen

ADDRESS

405 BRISA, La Grande, OR

EMAIL

d.mammen@conl.com

SIGNATURE

*Jim Kreider*

PRINTED NAME

Jim Kreider

ADDRESS

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La Grande, OR 97850

EMAIL

jkreider@campblackdog.org

SIGNATURE

*Judie Arritola*

PRINTED NAME

Judie Arritola

ADDRESS

603 Modelaire La Grande, OR

EMAIL

aritola@charter.net

SIGNATURE

*Pasco Arritola*

PRINTED NAME

Pasco Arritola

ADDRESS

603 Modelaire La Grande, OR

EMAIL

PS TOLA @ CHARTER.NET

SIGNATURE

*John Barutz*

PRINTED NAME

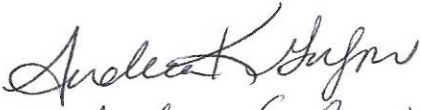
John Barutz


ADDRESS


484 Hawthorne LG, OR 97850


EMAIL


I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE   
PRINTED NAME Andrea Gulzow  
ADDRESS 486 Hawthorne DR, LA Grande  
EMAIL foreverfamily33@aol.com

SIGNATURE   
PRINTED NAME Frances E. Lillard  
ADDRESS 471 Modelaire Dr. L.G.  
EMAIL

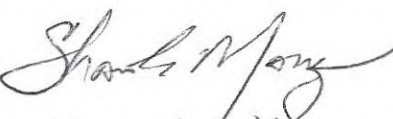
SIGNATURE   
PRINTED NAME Brent H. Smith  
ADDRESS 410 Allium St  
EMAIL smithbrent@gmail.com

SIGNATURE   
PRINTED NAME M. Jeannette Smith  
ADDRESS 410 Allium Street  
EMAIL jeannetterampf@gmail.com

SIGNATURE   
PRINTED NAME KIMBERLEY HEITSTUMAN  
ADDRESS 2409 CENTURY LP, LA GRANDE, OR 97850  
EMAIL kimheitstuman@hotmail.com



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE: 

PRINTED NAME Shawn K. Mangum

ADDRESS 2905 E. M. Ave,

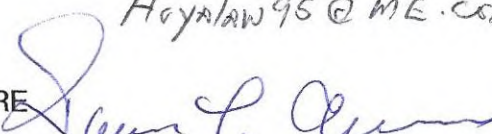
EMAIL Hoyalan95@ME.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
CONNIE L. ALLEN 541-9637720  
410 BALSA STREET LAGRANDE, OREGON 97858  
N/A

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

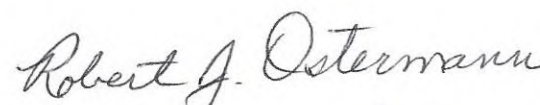
  
Linda Snyder  
491 Modelaire Dr

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
Robert J. Ostermann  
495 Modelaire Dr. La Grande, OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Robin J. Ostermann  
495 Modelaire Dr La Grande, OR 97850

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SIGNATURE

*Jonathan D. White*

PRINTED NAME

Jonathan D. White

ADDRESS

485 Modelaire Dr

EMAIL

jondwhite418@gmail.com

SIGNATURE

*Robin Stedfeld*

PRINTED NAME

Robin Stedfeld

ADDRESS

485 Modelaine Dr. La Grande

EMAIL

rstedfeld@yahoo.com

SIGNATURE

*Rita Allen*

PRINTED NAME

Rita Allen

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410 Balsa St. La Grande Or.

EMAIL

SIGNATURE

*Ruth Schumacher Yeates*

PRINTED NAME

Ruth Schumacher Yeates

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408 Sunset Drive La Grande, OR 97850

EMAIL

ruthschumacheryeates@gmail.com

SIGNATURE

*John Yeates*

PRINTED NAME

JOHN YEATES

ADDRESS

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EMAIL

jyeates52@gmail.com



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE 

PRINTED NAME LOIS BARRY

ADDRESS P.O. Box 566, La Grande, OR 97850

EMAIL loisbarry31@gmail.com

SIGNATURE 

PRINTED NAME CATHY WEBB

ADDRESS 1708 CEDAR ST. LAGRANDE, OR 97850

EMAIL thunkski@gmail.com

SIGNATURE 

PRINTED NAME Jack L. Martin

ADDRESS 1412 Gilcrest Dr. LaGrande

EMAIL Buff Martin 27 @GMail.com

SIGNATURE 

PRINTED NAME GERALDINE BRASETH-PALMER

ADDRESS 1602 GILCREST DRIVE LA GRANDE, Ore 97850

EMAIL 


SIGNATURE 


PRINTED NAME Jean BAPH

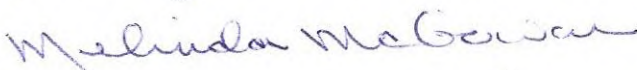
ADDRESS 1509 MADISON AVE LaGrande, OR 97850


EMAIL JBaph19@gmail.com


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SIGNATURE   
PRINTED NAME Damon Sexton  
ADDRESS 401 Balsa St La Grande, OR 97850  
EMAIL Sexton.damon@gmail.com

SIGNATURE   
PRINTED NAME Cory Sexton  
ADDRESS 401 Balsa Street La Grande OR 97850  
EMAIL Corytrix@gmail.com

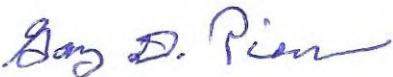
SIGNATURE   
PRINTED NAME Melinda McGowan  
ADDRESS 602 Sunset Dr.  
EMAIL melindamegowan@gmail.com

SIGNATURE   
PRINTED NAME Keith D. Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL Keithdhudson@gmail.com

SIGNATURE   
PRINTED NAME Laura Elly Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL ellyhudson@gmail.com



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE 

PRINTED NAME Gary D. Pierson

ADDRESS 489 Modelaire Drive, La Grande OR 97850

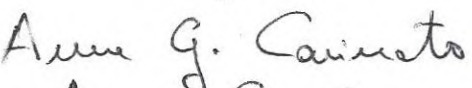
EMAIL —

SIGNATURE 

PRINTED NAME LYNN WHEELER DUNCAN

ADDRESS 489 Modelaire Drive, La Grande OR 97850

EMAIL rlwd1910@gmail.com

SIGNATURE 

PRINTED NAME Anne G. Cavinato

ADDRESS 86 Hawthorne Dr. La Grande, OR 97850


EMAIL acavinat@ecu.edu

SIGNATURE 

PRINTED NAME JOE HORST

ADDRESS 86 HAWTHORNE DR. LA GRANDE OR.

EMAIL joehorst@comi.com

SIGNATURE 

PRINTED NAME ANGELA Sherer

ADDRESS 91 W. Hawthorne Dr. LaGrande, OR 97850

EMAIL asherer@frontier.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
ADDRESS 97 W Hawthorne Dr, La Grande, Or. 97850  
EMAIL asherer@frontier.com

SIGNATURE *Heather M. Null*  
PRINTED NAME Heather M. Null  
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EMAIL hnull@comi.com

SIGNATURE *Bert R. Frewing*  
PRINTED NAME Bert R. Frewing  
ADDRESS 709 South 12<sup>th</sup> Street La Grande, OR 97850  
EMAIL jeanfrewing@gmail.com

SIGNATURE *Lindsey McCullough*  
PRINTED NAME Lindsey McCullough  
ADDRESS 406 Balsa St., La Grande, OR 97850  
EMAIL lindz\_mm91@hotmail.com

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL



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SIGNATURE *Merle E. Comfort*  
PRINTED NAME MERLE E. COMFORT  
ADDRESS 209 SCORPIO DRIVE LA GRANDE OR 97850  
EMAIL merlecomfort@gmail.com

SIGNATURE *Robin L. Maille*  
PRINTED NAME Robin Maille  
ADDRESS 401 Cedar St., La Grande  
EMAIL r-maille@icloud.com

SIGNATURE *Bruce C Kevan*  
PRINTED NAME Bruce C Kevan  
ADDRESS 1511 W Ave LG  
EMAIL bruce.kevan@lagrandesd.org

SIGNATURE *Carol S. Summers*  
PRINTED NAME CAROL S. SUMMERS  
ADDRESS 2811 Bekeler Ln - La Grande, OR  
EMAIL carolsummers1938@gmail.com

SIGNATURE *Caroline Kaye Juniper*  
PRINTED NAME Caroline Kaye Juniper  
ADDRESS 406 NTH ST. LaGrande - OR 97850  
EMAIL

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*Gerald D. Juniper*

PRINTED NAME Gerald Darwin Juniper

ADDRESS 406 4<sup>th</sup> St. LaGrande, OR. 97850

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL



## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:28 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposal Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.14.06.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter sign by me and 46 other residents of La Grande expressing our concerns regarding the B2H Project and requesting that EFSC Deny the Site Certificate.

I have also sent a bound copy of this material by US Postal Service.

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850

August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, Oregon. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the predicted noise levels resulting from construction and operation of the proposed Boardman to Hemingway Transmission Line Project. I would like to address the noise coming from the blasting and rock breaking specifically above the area at the top of Modelaire Drive 1 both to the north and the south of that area and also the construction traffic noise that that will impact the west hills and the area below.

In Exhibit X page X-9 3.3.1.1 2 blasting and rock breaking is mentioned saying that "Modern blasting techniques include the electronically controlled ignition of multiple small explosive charges in an area of rock that are delayed fractions of second, resulting in a total event that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140dBA at the blast location or over 90 dBA within 500 feet." This sounds oh so "don't worry about it, it will be OK just over in a split second." Living in this area off Modelaire Drive, I don't find this at all comforting. And the fact that this will be overseen by properly licensed personnel and all of the necessary authorizations doesn't help anything either.

The area in question, which for such inordinate construction is extremely close to many residents, has been my home for over 50 years and during



related medical problems and exhibit various reactions to loud noises.<sup>10</sup>  
These children also live in the neighborhoods to be affected by the noise so they would be impacted coming and going to school, at home and also while at school. To impose the constant possibility of loud noises is cruel, disrespectful and totally unacceptable. <sup>11</sup>

For a project like this involving blasting and heavy machinery noise so close to homes, schools, and medical facilities impacting hundreds of peoples' daily lives, the day to day agitation, wondering what is coming next, fear and being on constant alert are not just addressed by some type of mitigation but must be addressed by a route that is much less impactful to peoples' safety, sanity, and health.

Sincerely,

A handwritten signature in cursive script that reads "Virginia L. Mammen".

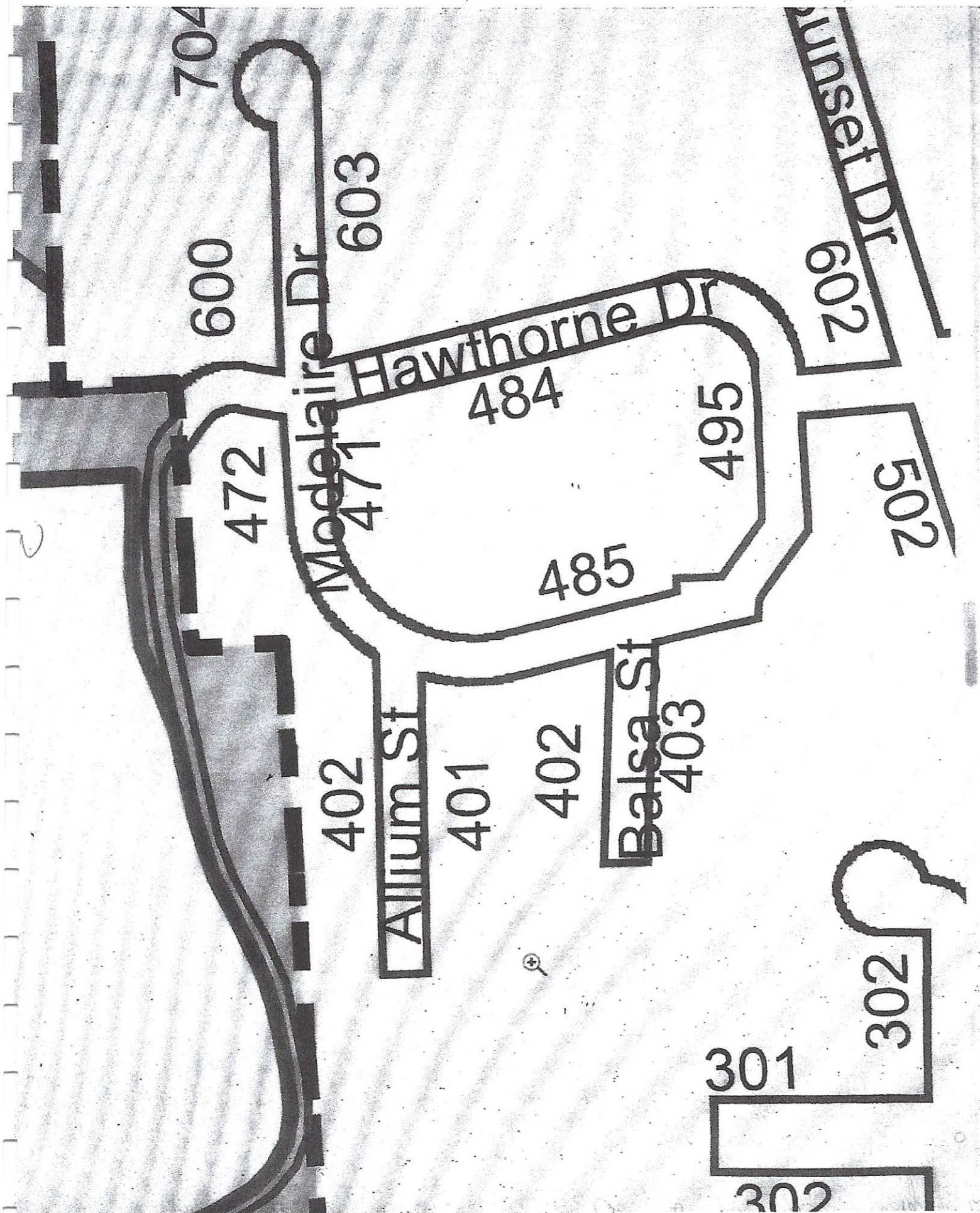
Virginia L. Mammen

405 Balsa

La Grande, Oregon 97850

gmammen@eoni.com

N





### 3.3 Predicted Noise Levels

OAR 345-021-0010(1)(x)(A): Predicted noise levels resulting from construction and operation of the proposed facility.

#### 3.3.1 Construction Noise

##### 3.3.1.1 Predicted Construction Noise Levels

Project construction will occur sequentially, moving along the length of the Project route, or in other areas such as near access roads, structure sites, conductor pulling sites, and staging and maintenance areas. Overhead transmission line construction is typically completed in the following stages, but various construction activities may overlap, with multiple construction crews operating simultaneously:

- Site access and preparation
- Installation of structure foundations
- Erecting of support structures
- Stringing of conductors, shield wire, and fiber-optic ground wire

The following subsections discuss certain construction activities that will periodically generate audible noise, including blasting and rock breaking, implosive devices used during conductor stringing, helicopter operations, and vehicle traffic.

#### **Blasting and Rock Breaking**

Blasting is a short-duration event as compared to rock removal methods, such as using track rig drills, rock breakers, jackhammers, rotary percussion drills, core barrels, or rotary rock drills. Modern blasting techniques include the electronically controlled ignition of multiple small-explosive charges in an area of rock that are delayed fractions of second, resulting in a total event duration that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140 dBA at the blast location or over 90 dBA within 500 feet.

Lattice tower foundations for the Project typically will be installed using drilled shafts or piers; however, if hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture the rock to reach the required depth to install the structure foundations. Final blasting locations will not be identified until an investigative geotechnical survey of the analysis area is conducted during the detailed design.

The contracted blasting specialist will prepare a blasting plan that demonstrate compliance with applicable state and local blasting regulations, including the use of properly licensed personnel and the acquisition of necessary authorizations. The Framework Blasting Plan is set forth in Exhibit G, Attachment G-5.

#### **Implosive Devices**

An implosive conductor splice consists of a split-second detonation with sound and flash. Implosive splicing activities are anticipated to be limited to daytime hours. A blasting plan will be developed by an individual certified and licensed to perform the work. The plan will communicate all safety and technical requirements including, but not limited to, delineation of the controlled access zone and distance away from residences.



## **Public Services**

### **OAR 345-022-0110**

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## **Waste Minimization**

### **OAR 345-022-0120**

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## **Need for a Facility**

### **OAR 345-023-0005**

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## **Specific Standards for Wind Facilities**

### **OAR 345-024-0010 and 345-024-0015**

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## **Specific Standards for Transmission Lines**

### **OAR 345-024-0090**

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





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## Department of Environmental Quality

### Chapter 340

#### Division 35

#### NOISE CONTROL REGULATIONS

**340-035-0035****Noise Control Regulations for Industry and Commerce****(1) Standards and Regulations:**

(a) **Existing Noise Sources.** No person owning or controlling an existing industrial or commercial noise source shall cause or permit the operation of that noise source if the statistical noise levels generated by that source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 7, except as otherwise provided in these rules. [Table not included. See ED. NOTE.]

**(b) New Noise Sources:**

(A) **New Sources Located on Previously Used Sites.** No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies. [Table not included. See ED. NOTE.]

**(B) New Sources Located on Previously Unused Site:**

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b)-(f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

**(iii) For noise levels generated or caused by a wind energy facility:**

(I) The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

(II) The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with wind speed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.

(III) The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

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(2) Compliance. Upon written notification from the Director, the owner or controller of an industrial or commercial noise source operating in violation of the adopted rules shall submit a compliance schedule acceptable to the Department. The schedule will set forth the dates, terms, and conditions by which the person responsible for the noise source shall comply with the adopted rules.

(3) Measurement:

(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

(B) That point on the noise sensitive property line nearest the noise source.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);

(b) Nothing in this rule shall preclude the Department from conducting separate or additional noise tests and measurements. Therefore, when requested by the Department, the owner or operator of an industrial or commercial noise source shall provide the following:

(A) Access to the site;

(B) Reasonable facilities, where available, including but not limited to, electric power and ladders adequate to perform the testing;

(C) Cooperation in the reasonable operation, manipulation, or shutdown of various equipment or operations as needed to ascertain the source of sound and measure its emission.

(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:

(a) Emergency equipment not operated on a regular or scheduled basis;

(b) Warning devices not operating continuously for more than 5 minutes;

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

(d) Sounds resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad only to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; but this exemption does not apply to any standard, control, license, regulation, or restriction necessitated by special local conditions which is approved by the Administrator of the EPA after consultation with the Secretary of Transportation pursuant to procedures set forth in Section 17(c)(2) of the Act;

(e) Sounds created by bells, chimes, or carillons;

(f) Sounds not electronically amplified which are created by or generated at sporting, amusement, and entertainment events, except those sounds which are regulated under other noise standards. An event is a noteworthy happening and does not include informal, frequent, or ongoing activities such as, but not limited to, those which normally occur at bowling alleys or amusement parks operating in one location for a significant period of time;

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment;

(i) Sounds created by lawn care maintenance and snow removal equipment;

(j) Sounds generated by the operation of aircraft and subject to pre-emptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not pre-emptively regulated by the federal government or controlled under OAR 340-035-0045;

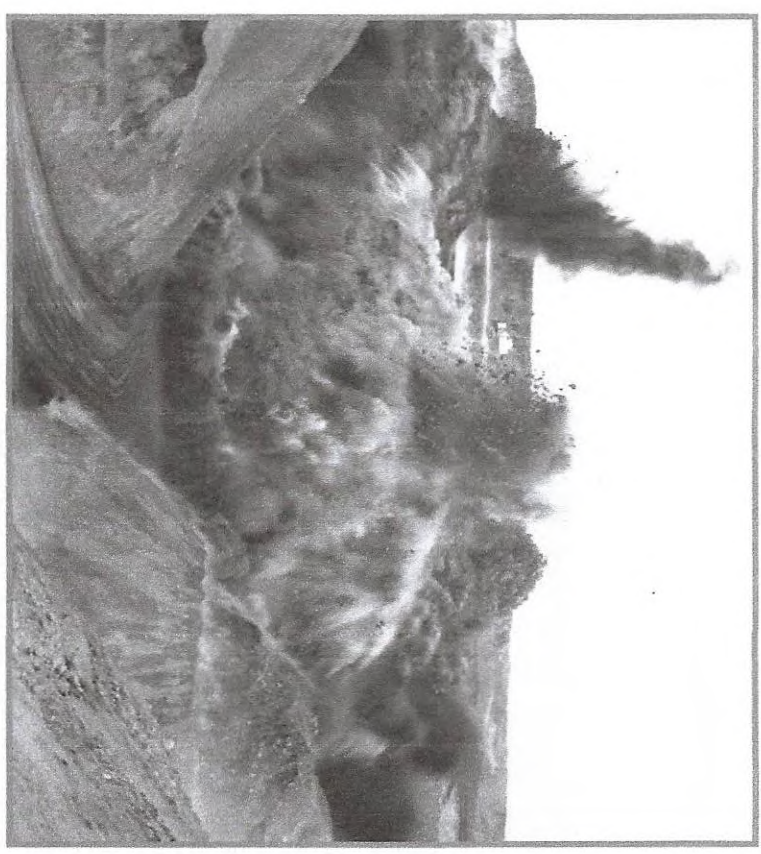


## Controlling the Adverse Effects of Blasting

This module addresses the control of offsite impacts that result from blasting, namely:

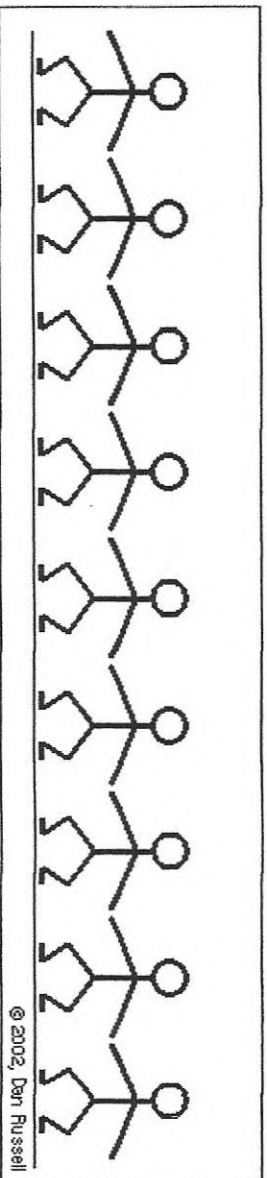
- vibrations,
- airblast, and
- flyrock.

Much of the information in the module is derived from the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The performance standards apply to all surface coal mines. Similar standards have been adopted on some State and local levels and applied to non-coal blasting operations such as quarrying and construction.



## Part I: Ground Vibrations, Airblast, and Flyrock

Explosive energy is used to break rock. However, the use of this energy is not 100-percent efficient. Some of the energy escapes into the atmosphere to generate **airblast or air vibrations**. Some of the energy also leaves the blast site through the surface soil and bedrock in the form of **ground vibrations**.



Both air and ground vibrations create waves that disturb the material in which they travel. When these waves encounter a structure, they cause it to shake. Ground vibrations enter the house through the basement and airblast enters the house through the walls and roof.

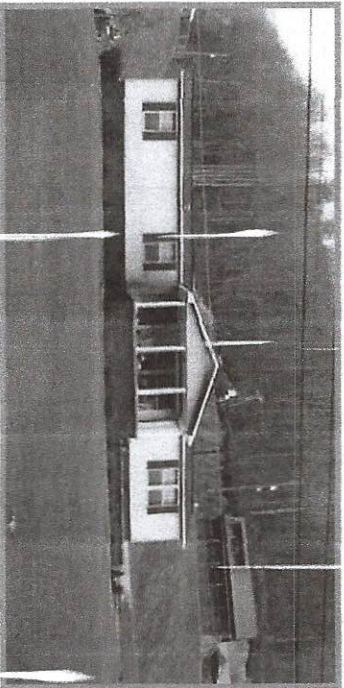
Airblast may be audible (noise) or in-audible (concussion). When outside a house the blast may be heard because of the noise, however noise has little impact on the structure. The concussion wave causes the structure to shake and rattles objects hanging on walls or sitting on shelves. This "interior noise" will alarm and startle people living in the house.

**Flyrock** is debris ejected from the blast site that is traveling through the air or along the ground. Flyrock the single most dangerous adverse effect that can cause property damage and personal injury or death.



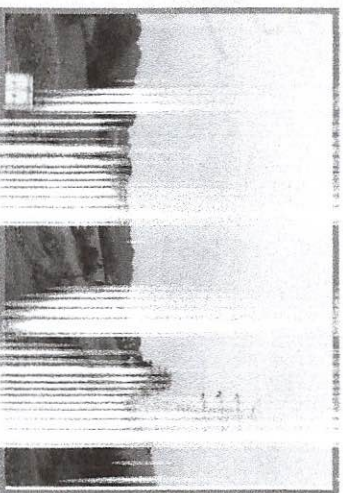
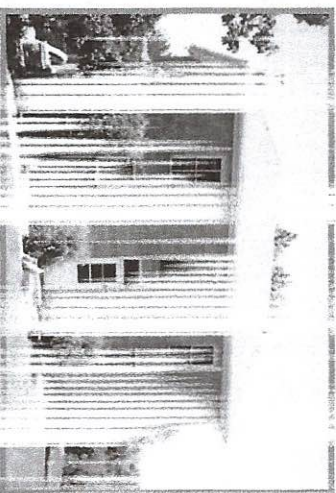
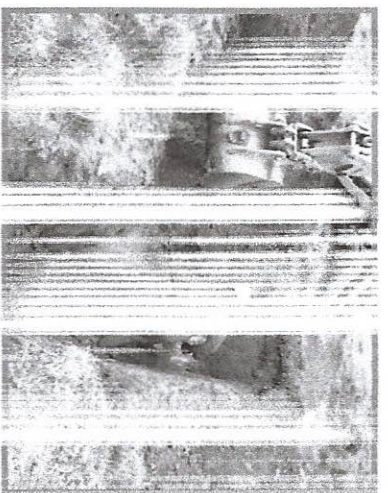
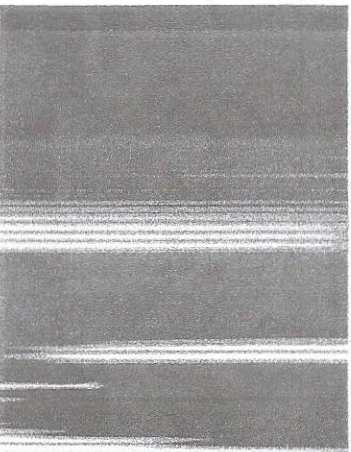
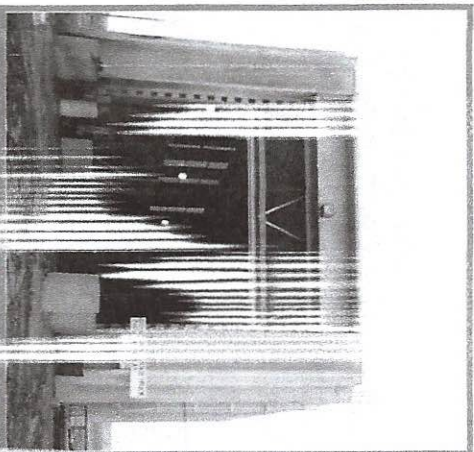
# Blasting Impacts on Structures

Both above-ground and below-ground structures are susceptible to vibration impacts. Structures can include onsite mine offices and buildings, as well as offsite residences, schools, churches, power-transmission lines, and buried pipelines. Some of these structures may include historic or cultural features sensitive to even low levels of vibrations.



It is important to understand:

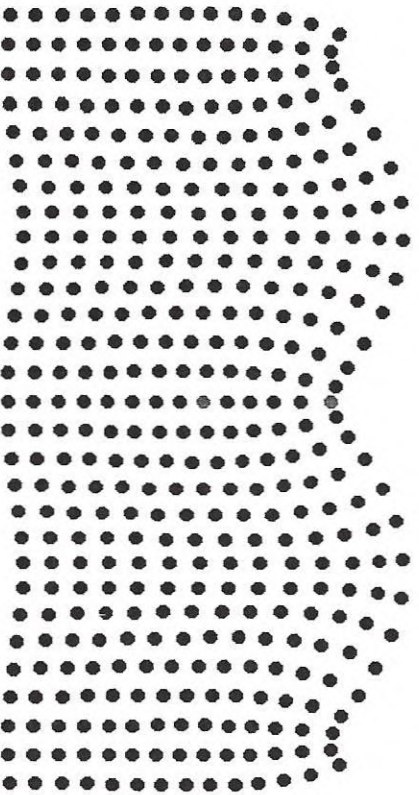
1. the causes of ground vibrations and airblast, and
2. what practices can be followed to control and minimize the adverse effects





# Ground Vibrations

Ground vibrations propagate away from a blast site as Rayleigh (or surface) waves. These waves form a disturbance in the ground that displaces particles of soil or rock as they pass by. Particle motions are quite complicated. At the ground surface (free boundary), measured particle motions have the greatest displacements, and displacements decrease with depth (see the illustration below). At a depth of between 20 to 50 feet below ground surface, particle displacements are barely detectable. Structures that are well coupled to the ground tend to move with this motion; structures buried in the ground are less affected by surface motions.



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Ground vibrations are measured in terms of **particle velocity** and are reported in inches per second (ips) or the speed at which a particle of soil or rock moves.

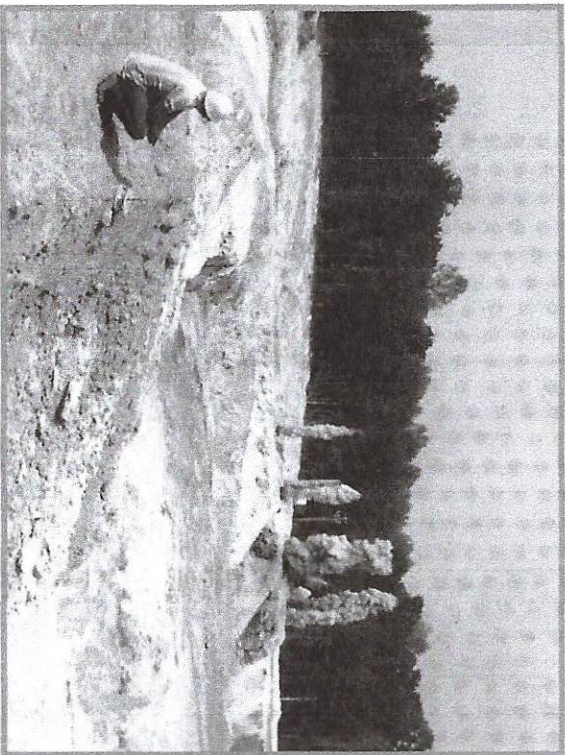
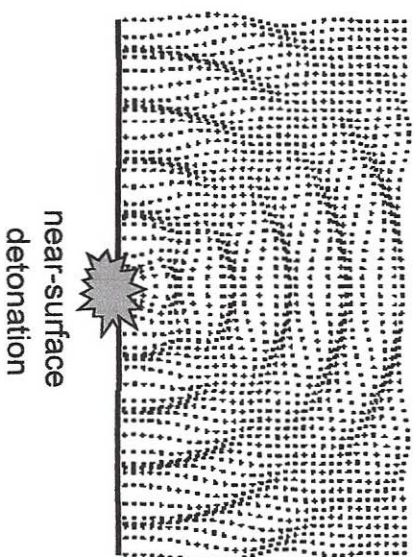
At typical blasting distances from residential structures, the ground only moves with displacements equal to the thickness of a piece of writing paper. In terms of displacement, this equates to hundredths of an inch; visually, such movement cannot be detected.



# Airblast

2 Airblast is measured as a pressure in pounds per square  
5 inch (psi) and is often reported in terms of **decibels (dB)**.

Airblast is a pressure wave that that may be audible or in-audible. Elevated airblast levels are generated when explosive energy in the form gases escape from the detonating blast holes. Energy escapes either through the top stemming or through fractures in the rock along the face or at the ground surface.



Airblast radiates outward from the blast site in all directions and can travel long distances. Sound waves travel much slower (1,100 ft/s) than ground vibrations (about 5,000 – 20,000 ft/s). Hence, airblast arrives at offsite structures later than do ground vibrations.

Both ground vibrations and airblast cause structures to shake structures. Occupants in structures that are located far from a blast may experience shaking from vibration and airblast as two separate, closely spaced events. This can be particularly bothersome, as it prolongs the duration of structure shaking and leads the property owner to think that two separate blasts occurred.



# Structure Response

As ground and air vibrations reach a structure, each will cause it to shake. Structure response is dependant on the vibration characteristics (frequency and amplitude) and structure type.

Ground Vibrations enter the house through the basement. This is like shaking the bottom of a flag pole. Movement at the top of the pole depends on how (frequency) and how hard (amplitude) the bottom of the pole is shaken. If shaken at just the right pace, or at the pole's natural frequency, the top will move significantly compared to the bottom. Motion at the top is amplified from the bottom motion.

All blast damage studies have measured incoming ground vibrations at the ground surface. The observed structure amplifications were typically between 1 to 4 times the ground vibration. Structure response below ground level is the same or less than the incoming vibrations

Airblast enters the house through the roof and walls. Like ground vibrations, the frequency and amplitude of the vibrations affect structure response. However the low frequency events (concussion) that most strongly affect structures is normally only a one or two cycle event.

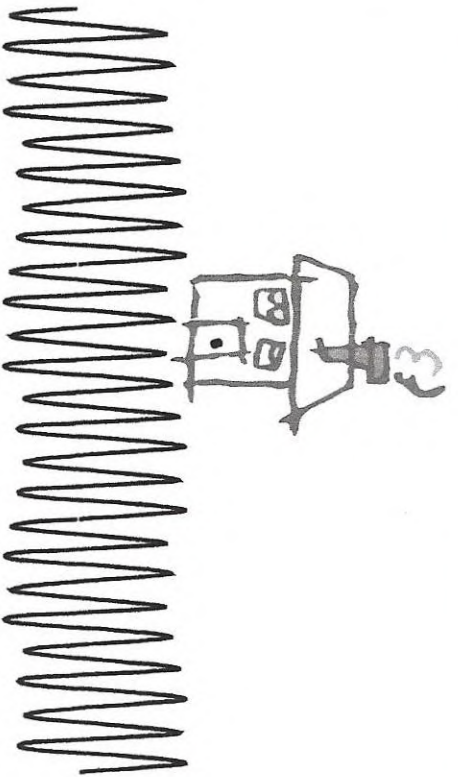
Due to the different arrival times of ground and air vibrations, occupants may feel two distinct impacts on the house.





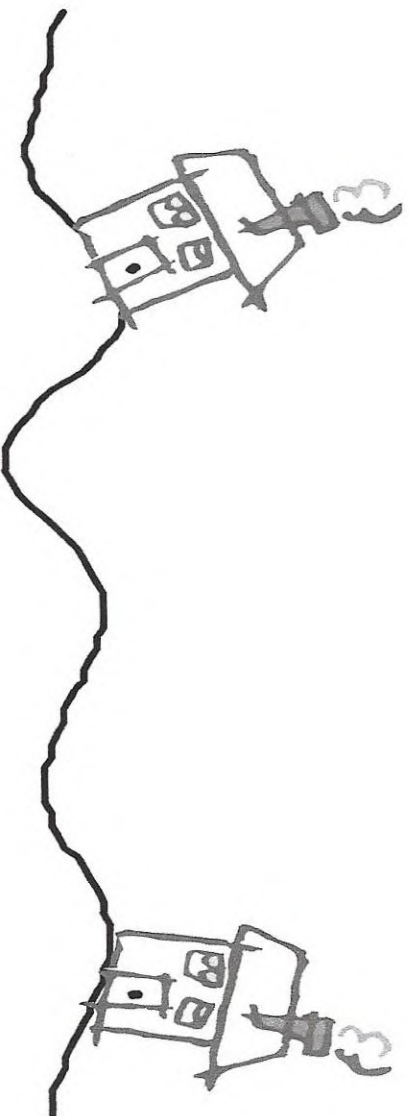
# Ground Vibration Structure Response

Exhibit 59



High frequencies do not promote structure shaking. The length of a single high-frequency wave cycle is short as compared with the dimension of a structure. A structure does not significantly respond to high frequencies.

On the other hand, low-frequency wave cycles are long as compared with the dimensions of structures. Accordingly, low frequencies tend to efficiently couple energy into structures and to promote higher-amplitude, long-duration shaking.



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Harvard Men's Health Watch

## A noisy problem

***People often become more sensitive to noise as they age, which can affect their mental and physical health.***

Published: March, 2019



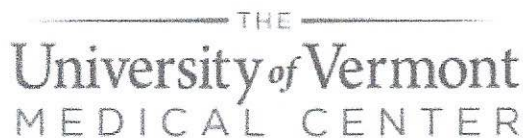
Image: © Juanmonino/Getty Images

Are you more sensitive to noises than you used to be? Do certain sounds now feel too loud and jarring? Don't worry; it's actually quite normal.

Age-related hearing loss is common among older adults and affects about two-thirds of men in their 70s and 85% of men ages 80 and older. Although it's not clear why, this can also make people hypersensitive to sounds that they used to tolerate easily, which in turn can affect their well-being.

"Exposure to noises from crowds, traffic, and other everyday sounds can become harder to tolerate and increase stress levels, leading to anxiety and a reduction in overall quality of life," says Dr. Stephanie Tompkins, an audiologist with Harvard-affiliated Massachusetts Eye and Ear. "As your sensitivity to noises increases, this can lead to greater isolation, too, as you may try to avoid potentially noisy places and situations."





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Quiet in the Hospital: How Noise...

## Quiet in the Hospital: How Noise Reduction Helps Patients Heal

on June 7, 2018 (<https://medcenterblog.uvmhealth.org/innovations/hospital-noise-reduction/>) in Innovation  
(<https://medcenterblog.uvmhealth.org/category/innovations/>) by UVM Medical Center  
(<https://medcenterblog.uvmhealth.org/author/uvmmedcenter/>)

Noise. It is present in almost every aspect of our lives. From the traffic in the streets, to the fan that provides us white noise in the background to sleep, noise exists. Unfortunately, like stress, too much of it can have a negative impact on a person's health and rest. Some sounds we do like to hear, such as birds chirping, signaling spring in Vermont, but what about sounds in a hospital?

Many of us get admitted to hospitals when we are too sick to take care of ourselves at home. We expect exceptional care from physicians and nurses and, of course, to rest in order to help our bodies heal. We understand that some noises in a hospital are necessary for care; however, others simply aren't.

### The Sounds of a Hospital

Many organizations, including the UVM Medical Center, have high tech equipment, which greatly assists in the delivery of care to our patients, but can also be noisy. Sometimes, healthcare providers are the source of the noise as we interact and communicate with our patients and other health team members.

Another factor is visits from families and friends during visiting hours. It is difficult when one's roommate is trying to rest in the opposite bed. Yet, we need to be cognizant of noise in patient care areas as sounds can be magnified and misinterpreted, increasing agitation and even confusion for some patients.

We become accustomed to the noise; our patients are not.

### The Research on Noise, Quiet, and Healing

Research has shown that noise plays a negative role in healing and that decreasing noise in patient care areas aids in healing processes and helps facilitate speedier recoveries for patients. Patients are able to heal, sleep better and recover more quickly when able to rest. A quieter environment can also help decrease burnout for hospital staff.

Studies show that patients are more likely to develop negative side effects from a noisy hospital, such as sleep disturbances, elevated blood pressure and heart rate, and increased use of pain medications.

Noise can also increase annoyance levels for staff. One study indicated noise, such as talking inside and outside patient rooms, is the most common source of noise as well as visitors' voices, TVs, and behaviors of other patients.

Research concluded that best practices to eliminate noise from talking included staff education about noise reduction, public indicators such as sound monitors, a quiet time protocol, and lower cost environmental fixes, such as fixing noisy doors and squeaky wheels. Lastly, by introducing scripting with routine monitoring, patients' perception of quietness increased and the perception of noise decreased.

## How We Address Noise at the UVM Medical Center

We introduced the "Culture of Quiet" Organizational initiative. The Nursing Professional Governance Patient and Family Experience Global council continued this work. After convening a small task force of nurses and assessing current quiet strategies, we introduced the following tactics:

- Many hospital units have designated 'quiet hours' with automatically dimming of lights at quiet hour intervals.
- Signage is visible in most patient care areas to help keep patients, family, and visitors aware. Throughout the hospital, you will see signs with a relaxing pair of Adirondack chairs and the sun setting with details on when a unit has quiet hours.
- Many semi-private rooms have windows in doors, so doors can be closed allowing for patient rest.
- We offer headphones for TVs and earplugs to help minimize sounds.
- In-patient kits contain a sleeping mask and other comfort items that can be provided at time of admission. Each kit contains a card and explains, 'the best healing occurs in a quiet environment.'
- New education material is available for staff, patients and visitors-just ask to review the next time visiting.
- Some units offer white noise machines, others have this built in.
- Noisy equipment such as wheels and doors can be tagged and replaced.
- Our facility and distribution staff have changed their cleaning and supply delivery schedules to accommodate patient care.
- Healthcare teams within the hospital are focusing efforts to cluster patient care to minimize interruptions to provide restful moments.

## How you can help us.

We ask patients and visitors to hold us accountable when sounds are too loud. We want our community to alert us when noise levels are high and we will do what we can to minimize sound. In turn, we ask that all members of the healthcare team, patients, family, and friends be aware to keep voices soft, cell phones on vibrate, and hold each other accountable for these are the times of the day when our patients take pause to rest and positively impact their healing.



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# Dangerous Decibels: Hospital Noise More Than a Nuisance

By Diane Sparacino, Staff Writer

Imagine a world where hospitals have become so noisy that the annoyance has topped hospital complaints, even more than for the tasteless, Jell-O-laden hospital food (Deardorff, 2011). If you're a nurse, you know that we're already there – with noise levels reaching nearly that of a chainsaw (Garcia, 2012). In fact, for more than five decades, hospital noise has seen a steady rise (ScienceDaily, 2005).

But it wasn't always that way. At one time, hospitals were virtually noise-free like libraries – respected spaces, preserved as quiet zones. The culture was such that a loud visitor might be silenced by a nurse's purposeful glare or sharply delivered "Shhh!" As early as 1859, the importance of maintaining a quiet environment for patients was a topic for discussion. In Florence Nightingale's book, "Notes on Nursing," she described needless noise as "the most cruel absence of care" (Deardorff, 2011).

Fast forward to 1995, when the World Health Organization (WHO) outlined its hospital noise guidelines, suggesting that patient room sound levels not exceed 35 decibels (dB). Yet since 1960, the average daytime hospital noise levels around the world have steadily risen to more than double the





acceptable level (from 57 to 72 dB), with nighttime levels increasing from 42 to 60 dB. WHO found that the issue was not only pervasive, but high noise levels remained fairly consistent across the board, despite the type of hospital (ScienceDaily, 2005).

Researchers at Johns Hopkins University began to look into the noise problem in 2003. They maintained that excessive noise not only hindered the ability for patients to rest, but raised the risk for medical errors. Other studies blamed hospital noise for a possible increase in healing time and a contributing factor in stress-related burnout among healthcare workers (ScienceDaily, 2005).

Technology is, of course, partly to blame. State-of-the-art machines, banks of useful alarms, respirators, generators, powerful ventilation systems and intercoms all add up to a lot of unwanted racket. When human voices are added to the mix, (i.e., staff members being forced to speak loudly over the steady din of medical equipment), it's anything but a restful environment. For the recovering patient in need of sleep, that can be a real issue (Deardorff, 2011).

Contributing to the problem, experts say, are the materials used in hospitals. Because they must be easily sanitized, surfaces cannot be porous where they could harbor disease-causing organisms. Rather than using noise-muffling materials like carpet, acoustic tiles and other soft surfaces, hospitals have traditionally been outfitted using smooth, hard surfaces – especially in patient rooms. Good for cleanliness – not so great for dampening sounds, which tend to bounce around the typical hospital (Deardorff, 2011).

Which brings us to the most recent research, published January 2012 in the *Archives of Internal Medicine*. In the report, Jordan Yoder, BSE, from the Pritzker School of Medicine, University of Chicago, and his colleagues associated elevated noise levels with “clinically significant sleep loss among hospitalized patients,” perhaps causing a delay in their recovery time (Garcia, 2012). During the 155-day study period, researchers examined hospital sound levels. The numbers far exceeded (WHO) recommendations for average hospital-room noise levels, with the peak noise at an average 80.3 dB – nearly as loud as a chainsaw or electric sander (85 dB), and well over the recommended maximum of 40 dB. And while nights tended to be quieter, they were still noisier than recommended allowances, with “a mean maximum sound level of 69.7 dB” (Garcia, 2012).

Perhaps most interestingly, the researchers broke down the sources of noise into categories: “Staff conversation (65%), roommates (54%), alarms (42%), intercoms (39%), and pagers (38%) were the most common sources of noise disruption reported by patients” (Garcia, 2012). “Despite the importance of sleep for recovery, hospital noise may put patients at risk for sleep loss and its associated negative effects,” they wrote. In addition, researchers found that the intensive care and surgical wards had some work to do in dampening noise levels, with ICU peaking at 67 dB and 42 dB for surgical areas. Both far exceeded WHO’s 30 dB patient room recommendation (Garcia, 2012).

Besides patient sleep deprivation, which itself can lead to a multitude of health problems including high blood sugar, high blood pressure and fatigue, studies have reported that elevated noise levels can increase heart and respiratory rates, blood pressure and cortisol levels. Recovery room noise causes patients to request more pain medication, and preterm infants “are at increased risk for hearing loss, abnormal brain and sensory development, and speech and language problems when exposed to prolonged and excessive noise” (Deardorff, 2011).

There is still more research to be done, of course, but Yoder and his colleagues had good news, as well; much of the hospital noise they identified is modifiable, suggesting that hospitals can take steps to successfully create a quieter environment for both patients and healthcare providers (Garcia, 2012).



Around the country, "quiet campaigns" have been launched by hospitals in an attempt to dampen nighttime noise. Besides dimming lights and asking staff to keep their voices down at night, they are working to eliminate overhead paging systems, replace wall and/or floor coverings – even the clang of metal trashcans. Northwestern's Prentice Women's Hospital in Chicago was built with noise reduction in mind, replacing the idea of centralized nursing stations with the advent of smaller, multiple stations (Deardorff, 2011)

Billed as "one of the nation's largest hospital construction projects," Palomar Medical Center in North San Diego County is a state-of-the-art facility that has been designed "to encourage quietness," according to Tina Pope, Palomar Health Service Excellence Manager. Slated to open its doors this August, the hospital will feature a new nursing call system to route calls directly to staff and help eliminate the need for overhead paging, de-centralized nursing stations and clear sig lines, allowing staff to check on patients without having to leave unit doors open. With measures already in place including "Quiet Hospital" badges on staff and posters at the entrance of every unit, a "Quiet at Night" campaign (9 p.m. – 6 a.m.), and a "Quiet Champions" program that encourages staff to report noise problems, Palomar is one of a growing number of hospitals working toward a new era of quiet.

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## Noises Are Truly Horrible For People Who Have PTSD

20 Mar '2018 [Sound](#)

Noise is a really big issue for PTSD survivors: people who have mental health problems because of their traumas. How are they connected?

Almost everybody has experienced a trauma. But some traumas are more scarring than others and can even result in long-lasting mental disorders like **PTSD**, which can have an extreme impact on someone's life. It's a disorder that can develop in the brain after a horrifying experience, like war or a car crash.

### Symptoms

The symptoms of PTSD are, to say the least, not pleasant. They range from nightmares about the traumatic events, disturbing thoughts and feelings, anxiety, trying to avoid anything that has something to do with the traumatic event, and an increase in the fight-or-flight response.

Around ten percent of the population suffers from PTSD, according to data from **NCBI**, a part of the US National Library of Medicine. And, remarkably enough, that percentage is the same for people who suffer from tinnitus (the sound of a constant beep in your ears). The NCBI clearly sees a link between the two.

PTSD survivors also suffer from the Exaggerated Startle Syndrome, with anxiety and actions in an extreme and irrational way too loud noises and bangs. And then there are the sounds that remind them of the sounds during the traumatic events, which can trigger memories of the





## Fear

PTSD can also cause a general fear of sounds: phonophobia, or a fear of some specific sounds: misophonia. Survivors of the disorder also are generally much more sensitive to sounds and perceive them as much louder than other people would.

All of this makes the life of people with PTSD very hard. If you think you are suffering from this, consult your doctor. Really, please do it. For yourself, and for the ones you love.

Do you have PTSD and would you like to tell your experiences to us? We are always very open and interested to hear what you have to say. And again: if you haven't done it yet, visit your doctor, please. Thank you!

[< Previous article](#)

[Next article >](#)

## Related articles





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## Does noise affect learning? A short review on noise effects on cognitive performance in children

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### Abstract

The present paper provides an overview of research concerning both acute and chronic effects of exposure to noise on children's cognitive performance. Experimental studies addressing the impact of acute exposure showed negative effects on speech perception and listening comprehension. These effects are more pronounced in children as compared to adults. Children with language or attention disorders and second-language learners are still more impaired than age-matched controls. Noise-induced disruption was also found for non-auditory tasks, i.e., serial recall of visually presented lists and reading. The impact of chronic exposure to noise was examined in quasi-experimental studies. Indoor noise and reverberation in classroom settings were found to be associated with poorer performance of the children in verbal tasks. Regarding chronic exposure to aircraft noise, studies consistently found that high exposure is associated with lower reading performance. Even though the reported effects are usually small in magnitude, and confounding variables were not always sufficiently controlled, policy makers responsible for noise abatement should be aware of the potential impact of environmental noise on children's development.

**Keywords:** noise, cognitive performance, cognitive development, children, speech perception, listening comprehension, irrelevant sound effect, classroom acoustics



In everyday life, cognitive tasks are often performed in the presence of task-irrelevant environmental noise. Accordingly, numerous studies on noise effects on performance have been conducted since the middle of the 20th century (for reviews see Hellbrück and Liebl, 2007; Szalma and Hancock, 2011), showing that—depending on characteristics of sounds and tasks—noise of low to moderate intensity may in fact evoke substantial impairments in performance.

Most of these studies were conducted with adults. The present review, however, will focus on studies including children. Children are especially vulnerable to harmful effects of environmental noise, as cognitive functions are less automatized and thus more prone to disruption. We will report findings concerning effects of acute noise on performance in concurrent auditory and non-auditory tasks, as well as effects of chronic noise on children's cognitive development.

### Effects of acute noise on children's performance in auditory tasks

Psychoacoustic studies have consistently shown that children's speech perception is more impaired than adults' by unfavorable listening conditions. The ability to recognize speech under conditions of noise or noise combined with reverberation improves until the teenage years (Johnson, 2000; Wightman and Kistler, 2005; Talarico et al., 2007; Neuman et al., 2010). With stationary noise makers, signal-to-noise ratios (SNRs) have to be 5–7 dB higher for young children when compared to adults in order to achieve comparable levels of identification of speech or nonspeech signals, with adult-like performance reached at about 6 years of age (Schneider et al., 1989; Fallon et al., 2000; Werner, 2007). However, with maskers that vary over time, i.e., with trial-by-trial variation of the maskers' spectral composition (Oh et al., 2001; Hall et al., 2005; Leibold and Neff, 2007) or with fluctuating maskers such as single-talker speech (Wightman and Kistler, 2005), adult-like performance is usually not reached before the age of 10 years. Furthermore, children are less able than adults to make use of spectro-temporal and spatial cues for separation of signal and noise (Wightman et al., 2003; Hall et al., 2005). These findings demonstrate that children are especially prone to *informational* masking, i.e., masking that goes beyond energetic masking predicted by filter models of the auditory periphery.

Studies identified a range of linguistic and cognitive factors to be responsible for children's difficulties with speech perception in noise: concerning the former, children are less able than adults to use stored phonological knowledge to reconstruct degraded speech input. This holds for the level of individual phonemes, as children's phoneme categories are less well specified than adults' (Hazan and Barrett, 2000), but also for the lexical level since children's phonological word representations are more holistic and less segmented into phoneme units. Therefore the probability of successfully matching incomplete speech input with stored long-term representations is reduced (Nittrouer, 1996; Metsala, 1997; Mayo et al., 2003). In addition, young children are less able than older children and adults to make use of contextual cues to reconstruct noise-masked words presented in sentential context (Elliott, 1979). Concerning attention, children's immature auditory selective attention skills contribute to their difficulties with speech-in-noise perception. Children's susceptibility to informational masking has been attributed to deficits in focusing attention on auditory channels centered on signal frequencies, while ignoring nonsignal channels (Wightman and Kistler, 2005). Behavioral and ERP measures from dichotic listening paradigms provide evidence that auditory selective attention improves throughout entire childhood (Doyle, 1973; Pearson and Lane, 1991; Coch et al., 2005; Wightman et al., 2010; Gomes et al., 2012).

Owing to the mediating role of linguistic competence and selective attention, children with language or attention disorders are still more impaired than normally developing children by noise in speech perception tasks (Geffner et al., 1996; Ziegler et al., 2005, 2009). A stronger noise effect is also evident for children tested in their second language when compared to native children (Crandell and Smaldino,



# Autism & Anxiety: Parents seek help for extreme reaction to loud noise

September 5, 2018

*Our 12-year-old son has autism, mild intellectual disability and anxiety attacks so severe that we end up in the emergency room. Loud noises are the worst – for example the school fire alarm, thunderstorms, a balloon popping, fireworks. Any help would be greatly appreciated.*



*This week's "Got Questions?" answer is by Judy Reaven, a clinical psychologist and associate professor of psychiatry and pediatrics at the University of Colorado School of Medicine and Children's Hospital Colorado, in Denver. Dr. Reaven's conducted research on the effectiveness of cognitive-behavioral therapy for anxiety in adolescents with autism, with the support of an [Autism Speaks research grant](#).*

***Editor's note: The following information is not meant to diagnose or treat and should not take the place of personal consultation, as appropriate, with a qualified healthcare professional and/or behavioral therapist.***

Thanks for the great question. It certainly sounds like your family is experiencing a very difficult situation. Anxiety symptoms and reactions are very common in individuals with autism spectrum disorder (ASD). They can interfere with functioning across home, community and school settings.

Although your son's reaction sounds more severe than most, many people with autism struggle with a range of fears, phobias and worries. These can range from a debilitating fear of, say, spiders or the dark to chronic anxiety about making mistakes or being late.

Fortunately, recent research suggests that anxiety in children and adults who have autism is quite treatable. Often, these individuals are helped by the same or similar strategies that work well in treating anxiety in the general population.

These approaches include cognitive behavior therapy, or CBT. Cognitive-behavioral approaches are well-established, evidenced-based treatments that have become the gold standard of psychosocial treatments for anxiety. [My own research](#) and that of my colleagues has demonstrated the helpfulness of modifying cognitive-behavioral approaches to address the special needs of those who have autism.

Where to begin?

You describe a number of fears that may be related to sensory sensitivities. I recommend that you begin by consulting an occupational therapist who can assess whether your son's extreme sensitivities to noises are part of a broader sensory processing disorder. If this is the case, and if your son's fears are exclusively triggered by sensory stimuli, then his symptoms may be best addressed by a sensory-focused intervention. Many occupational therapists who specialize in autism receive special training in this area.

It's common for children with ASD and anxiety to become extremely frightened in response to sensory stimuli. Perhaps – like many individuals with autism – your son also has difficulty telling you what's scaring him. Instead, he may show his fear with extreme avoidance of a situation.



For example, he might refuse to go to school after a fire drill. He might become fearful of birthday parties after being frightened by a balloon that popped unexpectedly. Other signs of extreme distress can include yelling, crying, clinging and general agitation. Because your son may have difficulty communicating, it's important to observe his behavior for these signs of distress. This can help you determine what's triggering his fears.

#### Avoidance versus learning to cope

Many parents go to great pains to protect their children by avoiding agitating situations. This approach is sometimes appropriate and even necessary. However, it denies individuals the opportunity to learn how to manage anxiety-provoking situations on their own.

By helping your son learn to manage his fear, you can prepare him for an unpredictable world so that he can participate in it to the maximum extent possible.

Given the severity of your son's anxiety symptoms, I suggest that you seek professional support in addition to the strategies offered here. Families whose children have milder symptoms of anxiety can try these strategies on their own – seeking professional help if symptoms worsen.

#### Tackling one fear at a time

I suggest making a list of your child's major fears and worries. Try to rank order them from mild to severe. To encourage success, I'd start with a mild-to-moderate fear before taking on his extreme reaction to loud noises.

Key components of a cognitive behavioral approach include introducing coping strategies such as deep breathing and "helpful thoughts" that can help a person manage fearful reactions.

For example, you can teach your son to take deep slow breaths to help manage his body's physical anxiety reactions.

"Helpful thoughts" are statements that your son can say to himself when faced with a situation that makes him anxious. For example, you can coach to your son to say, "This is a loud noise. I don't like it, but I can handle it."

To help your son to learn these strategies, I suggest you model taking deep breaths while repeating a "helpful thought" out loud.

#### Graded exposure

The most important step is to help your son face his fears a little at a time. We call this "graded exposure." For example, explain to your son that the two of you are going to listen to a recording of thunder. The first time, you might play the recording at a soft volume, then gradually increase the volume over time as he demonstrates increased comfort with the sounds.

Or you might try watching a video of a balloon pop – perhaps with the volume off the first time. Then he can watch a real balloon pop while standing some distance away. Over time, he can move closer and closer to the balloon.

After such exercises, you can present him with small rewards for being brave and "facing fears." Remember that even a small act of bravery – such as listening to a recording of thunder for 10 seconds – represents an important step toward handling fears. It deserves to be acknowledged.

Although graded exposure may seem counterintuitive, research indicates that this strategy is the single most effective strategy for getting over a particular fear.

I wish you and your son the very best. Please let us know how you're doing with an email to [GotQuestions@autismspeaks.org](mailto:GotQuestions@autismspeaks.org).

60  
Shares

## Additional Resources & Tools

#### EXPERT OPINION

[Help for Child with Autism & Recurring Behavioral Crises: Part 2](#)

#### EXPERT OPINION

[Parents Seek Help for Son with Autism and Recurring Behavioral Crises](#)





SCIENCE  
NEWS


#### EXPERT OPINION


[Parents Seek Help: Child with Severe Autism Eats Only Sweets](#)


I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

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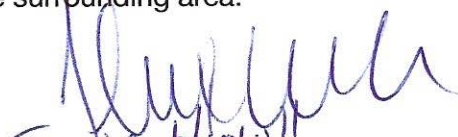
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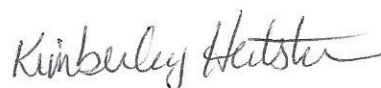
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# Oregon Department of Energy and the Energy Facility Siting Council

Public Hearing on the Draft Proposed Order  
for the Boardman to Hemingway Transmission Line  
June 18-20 and June 26-27, 2019, 4:30-8 p.m.  
Public Written or Oral Testimony Registration

Name (mandatory) Irwin H Smutz

Mailing Address (mandatory) 59074 Foothill Rd  
La Grande Ore 97850

Phone Number (optional) (541) 963-5034 Email Address (optional) \_\_\_\_\_

Today's Date: 6/20/19

Do you wish to make oral public testimony at this Hearing: Yes X No \_\_\_\_\_

Written comments can also be submitted today.

All written comments must be received by the deadline, July 23, 2019, 5 p.m. PDT to:

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, OR 97301  
Fax: 503-378-6457  
Email: [B2H.DPOComments@oregon.gov](mailto:B2H.DPOComments@oregon.gov)

Note: by submitting written or oral testimony, you will receive a notice from the Oregon Department of Energy at a future date of the opportunity to request party status in a contested case hearing on the proposed facility.

## Written Testimony

(Please print legibly – Use the back for additional space if needed. Additional written comments may be attached to this card.)

I want to testify what it is like for a power  
line to go through my Ranch.



<p style="text-align: right;">Page 142</p> <p>1 But historically, like I said, the Oregon 2 Trail, we have to consider it. We have got the 3 procurement of land, and apparently no letters were 4 offered for the initial route before anybody had a 5 chance to respond. And now this new thing comes in and 6 we all get a surprise. 7 I think a lot of people have a lot more to say 8 about this than me; so I'm just going to yield back my 9 time. 10 HEARING OFFICER WEBSTER: Thank you. 11 Following Irwin Smutz, we have Jeri Watson, 12 and then I don't know if Idaho Power wants to -- okay. 13 So then we will hear from Idaho Power after that. 14 MR. IRWIN SMUTZ: My name is Irwin Smutz, and 15 I live at 59074 Foothill Road. My ranch borders the 16 game refuge. I have got two oil lines, two gas lines, 17 and two fiberoptic lines, and the power line that, I 18 think your alternative route, I think the preferred 19 route is going to be just above that power line. 20 I have two concerns: One of them is the fire 21 danger. That present power line set a fire a few years 22 ago close to Ladd Canyon. The people that ran the power 23 line, a long distance line, failed to keep the brush cut 24 underneath the line, and the tree grew up and that line 25 arced and started a fire.</p>	<p style="text-align: right;">Page 144</p> <p>1 And also it was kind of hinted at by another 2 speaker, where the hospital is, that is really unstable, 3 too. They had to put in a huge amount of cement to try 4 to keep that thing from shifting, the new building that 5 they put there at the hospital. 6 The site that my house is on is also shifting. 7 I have a board fence and they have all pulled away from, 8 in places they have pulled away from the posts because 9 the building site is going down the hill. Well, that is 10 a thing that you are dealing with on the power line 11 going through that area. 12 So I just really appreciate you listening to 13 me, but I am concerned. These people have serious 14 concerns, it makes a really big difference. You can put 15 these things through and they'll pay so much a foot to 16 go through and then you put up with it for the rest of 17 your life. 18 Just an example, I went to put some fence 19 across all those pipe lines, and somebody came out and 20 told me I was not allowed to put any steel posts in the 21 fence going across that because some of the, I guess the 22 fiber optic lines or something were only underneath the 23 line about 4 inches they said. 24 So I really appreciate you folks listening. 25 And I just wanted to share that with you. I have had</p>
<p style="text-align: right;">Page 143</p> <p>1 Also, in the site, the area where they are 2 going to put the proposed power lines through that you 3 are talking about is in an unstable area. My dad went 4 up and checked the cows when I was a boy, and he got up 5 to this real steep unstable area, and the ground had 6 shifted because of another line that came through, an 7 oil line, it shifted, and this pipe came out, out of the 8 ground 5 or 6 feet in the air and made a bend. 9 Fortunately, it did not break, or oil or gas or whatever 10 they put through that, would have ran down the hill. 11 Well, this proposed power line is going 12 through that area where that shift was. They cut 13 through shale type ground, and they kind of loosened the 14 thing up. So that's a thing that really kind of 15 concerns me. Of course, we have a lot of game of all 16 kinds, we border the game refuge. 17 But I would just like to share that this is 18 one problem that you would have. The building site 19 where all my buildings are on the ranch there are down, 20 of course, at the bottom of the hill, and I guess the 21 building site where my buildings are slid off the top of 22 the mountain some time in prehistoric history. And the 23 geologist out there told Dad, I guess the rest of it 24 will stay up there. But that line is going to be going 25 right across that unstable land.</p>	<p style="text-align: right;">Page 145</p> <p>1 quite a bit of experience on things coming through my 2 land, and it does have everlasting consequences once 3 these things go through. 4 Thank you very much. 5 HEARING OFFICER WEBSTER: All right. Jeri 6 Watson. 7 MS. JERI WATSON: Hello. Long day. I really 8 appreciate you all being here. And I'm Jeri Watson, 9 J-e-r-i, W-a-t-s-o-n, and I live at 1906 Foley Street in 10 La Grande. 11 I've been here for about 40-some years. And I 12 moved here, I came from a city in California called 13 Torrance, and I moved here to teach school, knowing that 14 I wouldn't make the kind of salary here that I would 15 make in places that I was capable of going. I'm not 16 trying to be modest, but I'll just give you an idea of 17 my qualifications. I could teach, I'm certified in 18 special ed, high school, elementary school, I speak 19 three languages; one being Spanish. The others are 20 Japanese and obviously English. I was at the top of my 21 class at University of Southern California, and I really 22 could have gone anywhere if money was important to me. 23 Enough money to get by is important. 24 But my folks didn't want me to come here. 25 They said, You can't eat the scenery. But I live every</p>

August 10, 2019

Energy Facilities Siting Council

c/o Kellen Tardaewether, Siting Senior Analyst

Oregon Department of Energy

550 Capitol St. N.E.

Salem, OR 97301

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

Re: Geological Hazards and Soil Stability; Exhibit H.

**Re: Geologic Hazard Protection - Drill site 117/2 and 118 or vicinity on unstable and steep slopes in an active seismic zone**

My name is Irwin Smutz. My family has lived in La Grande for since 1862. My comment addresses the danger that construction and operation of an additional transmission line in an active seismic zone presents to me and my neighbors.

**The relevant standard is 345-022-0020 Structural Standard:**

**“(a) The applicant through appropriate site-specific study, has adequately characterized the seismic hazard of the site; and**

**(b) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site. As identified in subsection (1)(a);**

**(c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility;”**

**(d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).”**

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho, January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035.*



The construction process is described in detail in 3.9 Mitigation of the Exhibit H of IPC's ASC. Specifically, the area at or near **Drill site 117/2 and 118** and vicinity are shown and described on the following tables and maps with analysis by Shannon & Wilson, Inc.:

Soils; Map page 22 of 44:

Table B3: Soil Descriptions, described as:

56E, erosion hazard; severe; percent of slope Low; 2: High; 35. (sheet 2 of 4)

Table C1: Summary of Proposed Borings; Map Sheet 44

117/2 –Angle change along alignment.

118 – No information included for this tower.

E.2.16 SLIDO 311

SLIDO -3.4 Fern ML2010\_311 Northing: 5002434 Easting: 421959 Sheet 16

"SLIDO 311 is references at a scale of 1:100,000 (Ferns et al, 2010), and its mapped extents intersect the IPC Proposed Route between towers 118/4 and 118/6 and the Morgan Lake Alternative alignment between ML-19/2 and ML-19/3. While IPC Proposed Route tower 118/5 and its associated work area are within the area mapped as SLIDO 311, the feature is considered as talus/colluvium, not a landslide, a field reconnaissance of the area should be performed as part of the geotechnical exploration program."

E-2-17 SLIDO 2280, 2282

SLIDO-3.4 FernM2001a\_2280 and FernML2001b\_2282

Northing: 5001693 Easting: 421505 Sheet 16

SLIDO-3.4-Fern ML2201b\_2281

Northing: 4999554 Easting: 422283 Sheet 16

"SLIDO 2280 and 2282 are a single small landslide that is located between the USGS Glass Hill and Craig Mountain quadrangles. Review of the DTM and aerial photographs suggest that the features of the landslide extend beyond the SLIDO mapped limits, as shown on the Landslide Inventory (Sheet 16). The IPC Proposed Route crosses the apparent landslide limits between towers 118/6 and 119/2. An existing road is present in the apparent head scarp area (near the 2280 and 2282 contact line)."

**One of the above described slides caused the buckling in the transmission line going across my property. It is bowed up above ground. How safe does that sound? Why would it be a good idea to run a high voltage transmission line along side of it?**

The applicant has not fully described the risks of heavy construction in this area. What mitigation methods would be required to place earthquake resistant towers on unstable slopes, in an active seismic zone, if the area suffered an earthquake of the intensity that formed these slopes.

Special Paper 6, included on the DOGAMI website, describes an extensive study done in 1979 by the Geoscience Research Consultants in Moscow, Idaho and State of Oregon Department of Geology and Mineral Industries on the seismic history of the Blue Mountains and the La Grande area. The introduction of this paper is closes as follows: "In summary, consistencies of structural trends, compatibility of the Blue Mountain folding to backslope faulting in the La Grande area and systematic distribution in the orientation of linear trends favor northwesterly compression as the tectonic control in the study area. Furthermore, the general lack of interference, or lateral offset of linears or of any of the intersecting faults, as is discussed in the next sections, **suggest that all of the post-Columbia River Basalt Group structures in the area near La Grande have been created in response to only one major tectonic episode.**"

The IPC ASC to the EFSC (Exhibit H – Attachment H-1, page 29) includes the following brief description of the area: 4-3.2.3 The Craig Mountain Section (802c) The Craig Mountain section consists of about 6 miles of fault, forming steep range front along the east flank of Craig Mountain. Craig Mountain is identified by linear fronts and numerous springs, with hot springs located at the northern end of the section. Latest Quaternary displacement has not been identified at this time; however, multiple landslide complexes located along the mountain front may be covering evidence of recent faulting. The Faults in the Craig Mountain section have an average strike of N49° W and an estimated dip of 60° NE to 70° NE. Vertical offsets of the Miocene CRB are estimated to be around 2,400 feet of Hot Lake springs (Personius, 2002e).

"The West Grande Ronde Valley fault zone may be active. Subtle topographic features indicate that there may have been earthquakes that broke through the ground surface as recently as the last 10,000 years. Previous studies indicate that the West Grande Ronde Valley fault is capable of generating a magnitude 7 earthquake." From Summary of the La Grande Quadrangle Geology" also on DOGAMI website.

345-022-000 (2)(D) states the IPC's ASC must describe" The magnitude of any anticipated adverse effects on a resource or interest, taking into account any proposed mitigation." IPC characterizes the likelihood or strength of an earthquake in this area based on recent occurrences. **3.7.4 Recorded Earthquakes; ...**" Earthquake data for Idaho and Oregon were obtained from the applicable state geologic survey departments. None of the recorded earthquakes within the site boundary exceeded Richter magnitude 6.0. The recommended design earthquake magnitudes of 6.0 to 6.2 appear realistic, given the maximum magnitude of historic earthquakes." ASC, page H-12.

There are dangers both to human safety and the environment with an additional transmission line in a possibly quite seismic area, so close to a populated area. Further study and subsequent intrusive construction will not reduce the risks to the safety of the residents nearby. **The application does not comply with the relevant standard.**

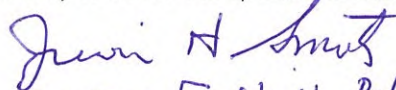
Remedies:

Additional study of the probable seismic hazards; including ground failure, landslide, cyclic softening of clays and silts, etc. as required by OAR 345-022-0020, Rev. subsection 12. "The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule seismic hazard includes ground shaking, ground failure, landslide,



liquefaction, triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction.”

Disqualify this route as an unreasonable risk for a site for an additional high voltage power facility and too close in proximity to other utility lines already on my home place.

Erwin Smutz  Irwin H. Smutz  
Address: 57074 Foothill Rd  
La Grande, OR 97850  
References:

Barrash, Warren, John G Bond, John D. Kauffman, and Ramesh Venkatakrishnan, 1980, Geology of the La Grande Area, Oregon: Oregon Department of Geology and Mineral Industries Special Paper 6.

Burns, W. J., Mickelson, K. A., Saint-Pierre, E. C., 2011 *SLIDO-2, Statewide Landslide Information Database for Oregon, Release 2*; Oregon Department of Geology and Mineral Industries.

Ferns, Mark L. McConnell, V. S., Madin, I.P., and Johnson, J.A., 2010 Geology of the Upper Grande Ronde Basin, Union County, Oregon: Oregon Department of Geology and Mineral Industries Open-File Report 2003-11, 85.0, scale 1:125,000.

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

Oregon Department of Energy, Energy Facility Siting Council, OAR Amend: 345-022-0020; *Structural Standard* EFSC 2-2017 Chap. 345, Division 22; General Standards for Siting Facilities. Effective date: 10/18/2017.

Idaho Power Corporation, 2017, *Exhibit H of the Application for the Boardman to Hemingway Transmission Line Project*: Report Prepared by Idaho Power Corporation, Boise, Idaho.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho January 25, 2018*, Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035, page 28 and elsewhere.

Personius, S. F. Compiler, 202c, Fault number 802a West Grande Ronde Valley fault zone, Mount Emily section, in Quaternary fault and fold database of the United States: U. S. Geological Survey website <http://earthquakes.usgs.gov/hazards/qfault/>, accessed 11/16/2016 06:23 PM

Schlicker, H. G. and Deacon R. J. 1971 Engineering Geology of the La Grande Area, Union County, Oregon: Oregon Department of Geology and Mineral Industries Open File Report O-1971-03, 16 p., 1 plate, scale 1:24,000.

State of Oregon Department of Geology and Mineral Industries; Publications Center;  
<http://www.oregongeology.org/pubs>.

August 10, 2019

Energy Facilities Siting Council  
Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301

Vial EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019.

Dear Chair Beyeler and Members of the Council:

Regarding the Boardman to Hemingway Transmission Project, the monitoring of noise to establish baseline noise levels failed to comply with the requirements of OAR 340-035-0035(3)(b). This rule establishes the location and procedure for completing sound measurements as listed in the Sound Measurement Procedures Manual 1. The location is specifically described as the further point from the noise source between a point 25 feet toward the noise source from the noise sensitive building or the point on the property line nearest the noise source.

Idaho Power ignored the specific procedural requirements for establishing a baseline noise level in several ways:

1. They placed measuring points “representative of the house and yard accommodations.” Measuring points were placed “in similar surroundings experiencing the same weather and acoustic conditions of where a resident was expected to spend the majority of time when outdoors,” or they were placed to accommodate the homeowner’s request. (See 3.2, Page 7 of Attachment X-2, Baseline Sound Survey) The procedure for doing noise monitoring to establish baseline very specifically defines where the monitoring equipment is to be placed in relation to the noise sensitive property. Note that on Page 549, line 16 through 24 of the Draft Proposed Order states that the monitoring positions were 25 feet toward the source. This is not what the developer says. In fact, by changing the measurement point or using measurements from one residence to assume sound level at others makes all the measurements invalid that was not performed at the stated location for each residence. On page 7 of the Attachment X-3, Supplemental Baseline Sound Survey for the Tub Mountain, Burnt River, and East of Bombing Range Road Alternate Corridors, the developer states, “MPs were placed in similar surroundings experiencing the same weather and acoustic conditions to where a resident was expected to spend the majority of time when outdoors. However, some property owners voiced opinions and preferences on the exact locations of the MP on their properties.” No reliable results can be obtained when the individual(s) doing the monitoring do not adhere to the strict protocol used to complete the monitoring.
2. When modeling results showed a “potential for increasing sound levels by 10 dBA or less,” the developer assumed compliance with the ambient degradation standard and did not complete testing to determine baseline sound levels. (Page 5, Line 24 of Attachment X-2, Baseline Sound Survey) This did not provide for any margin of error as any level over 10 dBA would be an exceedance of the standard. The developer failed to apply a reasonable margin of error, which would have resulted in doing measurements for any residence predicted to have an increased sound level of 8 dBA to allow for 95% reliability. See attachment “Uncertainty of  $L_{DEN}$  Calculation for corona noise from Ultra High Voltage power lines using reference methods” by T. Wszolek, AGH University of Science and Technology, Department of Mechanics and Vibroacoustics. September 30, 2006.

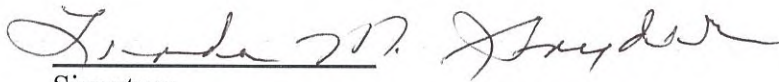


3. The practice of using a baseline sound measurement at a single monitoring point to represent a group of nearby noise sensitive properties is unacceptable. The developer stated that "due to the large number of NSRs identified within the analysis area, it was not feasible to conduct baseline monitoring at every individual noise sensitive property." (Page 5, Line 36, Attachment X-2, Baseline Sound Survey.) The noise rules do not require noise monitoring. They do state the methods that are to be used to establish baseline noise levels in the event the developer chooses to do actual noise measurements. The developer had the option and could have taken it to use the standard assumed 26 dBA for any noise sensitive property they were not able to monitor per the prescribed methods for any reason.
4. The only monitoring results which should have been used to establish a baseline noise level other than the standard should have been the 22 measuring points which performed during the entire monitoring period, assuming they were placed at a location as described in OAR 340-035-0035(3)(b). Locations, where baseline modeling was not completed per the DEQ protocol, need to use the assumed baseline sound measurement. Instead, the developer used the measurements from one residence to establish what they thought it would be at another; they averaged the results from MP 13 and MP 16 to guess at the measurement at MO 15. These MP's were located roughly 5 miles in different directions from MP 13 and MP 16. See description on page 8, lines 17 through 26, Attachment X-2, Baseline Sound Survey, for an example of the shoddy methods used to complete the monitoring, which clearly would not hold up under peer review.
5. While the developer makes several references to the methodology used in the Big Eddy Knight transmission line EIS, the final outcome regarding noise was that the developer would not be allowed to exceed the noise standard.

Idaho Power failed to follow the methodology for establishing a baseline noise level required by OAR 340-035-0035 or use the assumed baseline noise level resulting in the establishment of flawed baseline noise levels. None of the results of the noise modeling can be assumed to be accurate as a result. All material needs to be corrected and resubmitted.

No site certificate can be issued due to the lack of compliance with the noise monitoring protocol.

Sincerely,

  
Signature

Printed Name: LINDA M SNYDER

Mailing Address: 491 Modulaire Drive (P.O. Box 398)  
La Grande OR 97850

July 27, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Siting Senior Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR 97301

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018;  
Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

I am an Eastern Oregonian and have traveled and recreated in the vicinity of Hilgard State Park for many years. I have concerns about the steep slopes, soils hazards, landslide risks, and erosion impacts that the construction of the Boardman to Hemingway Transmission line will pose in an already dangerous canyon.

Re: Soil Protection - **Drill site 95/3 and 95/4 on unstable and steep slopes**  
345-022-0020

(c) ...*The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soil hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility...*

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council;  
effective date 10/18/2017; agency approved date 09/22/2017.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500 kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035.*

**Drill sites 95/3 and 95/4** are shown on the following tables and maps and analysis by Shannon & Wilson, Inc.:

Soils; Map page 18 of 44:

Table B3: Soil Descriptions, described as:

5776CN; erosion hazard; severe, percent of slope Low; 30: High; 60. (sheet 3 of 4)

Table C1: Summary of Proposed Borings; Map Sheet 36

95/3 – Angle change along alignment; Slope stability/landslide; Geo-Seismic Hazard; Road and railroad crossing

95/4 - Angle change along alignment; Road and railroad crossing

Appendix E: Landslide Inventory, E.2.3; PLS-002 Sheet 5, 6

“PLS-002 is an approximately 460-acre potential landslide that was identified in available LiDAR data. PLS-002 has not been verified in the field and should not be considered a landslide based solely on interpretation of LiDAR data. The IPC Proposed Route passes above this potential landslide between towers 93/5 and 95/3, potentially affecting the stability of these proposed towers and associated work areas. A field reconnaissance along this portion of the alignment should be performed as part of the geotechnical exploration program.”

Idaho Power Corporation, in Exhibit H 2.2.4 states “*The soils (in Union County) vary from a few inches to a few feet thick over weathered bedrock, are generally well-drained, and are typically characterized as having a severe erosion hazard.*” Idaho Power Corporation admits in ASC page B-12 that “*The mountainous area such as the Blue Mountains present very challenging topography with many areas of steep slopes in excess of 35 percent and other areas of unstable slopes*



*presenting design and construction challenges.” IPCs stated original intention to the EFSC was the following: “Using topographic maps the corridors were adjusted to avoid or minimize distance across very steep slopes and other physical features less desirable for construction and operation of a transmission line.*

**Hazard Analysis** Union County Emergency Operations Plan Updated 6/30/16 lists Winter weather as the highest weighted risk item before Seismic, Fire, Hazmat-Transportation, and Drought. Most of the area receives a large percentage of the annual moisture as snowfall and both the winter storms and the spring melt can be precipitous and unpredictable.

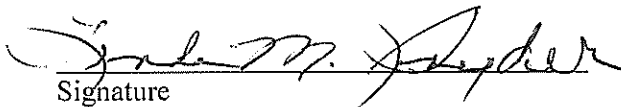
The area surrounding the drill site **95/3 and 95/4** is within a mile of the Hilgard Junction State Park and Recreation area and the heavily traveled I84 transportation/utility corridor.

Conclusion and Requested Relief:

**Drill site 95/3 and 95/4, and its vicinity**, represent a significant risk of several possible adverse effects. This area encompassed by the lands shown in PLS-002 should be removed for consideration as a site for a transmission “facility.” While Idaho Power Corporation attempts to mitigate problems of unstable soil with structure and footing modifications, this should not be considered an acceptable risk when the entire area is unstable.

I appreciate your consideration and your attention to this matter.

Sincerely,

 SNYDER,  
Signature Printed Name: LINDA M Snyder

Mailing Address: 491 Modelaine Drive (P.O. Box 398)  
LaGrande OR 97850

#### References

Burns, W. J., Mickelson, K. A., Saint-Pierre, E. C., 2011 SLIDO-2, Statewide Landslide Information Database for Oregon, Release 2; Oregon Department of Geology and Mineral Industries.

Idaho Power Corporation, 2017, *Exhibit H of the Application for the Boardman to Hemingway Transmission Line Project*: Report Prepared by Idaho Power Corporation, Boise, Idaho.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho* January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035.

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

Oregon Department of Energy; Energy Facility Siting Council – Chapter 345, Division 22 General Standards for Siting Facilities; OAR Amend: 345-022-0022; Soil Protection

Idaho Power Corporation, 2017, *Exhibit H of the Application for the Boardman to Hemingway Transmission Line Project*: Report Prepared by Idaho Power Corporation, Boise, Idaho.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho* January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035, page 28 and elsewhere.

Union County, Oregon, Union County Emergency Operations Plan – Hazard Analysis. Updated – 6/30/2016.

*Drilling on steep slopes*

## **TARDAEWETHER Kellen \* ODOE**

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**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:53 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.38.19.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter signed by me and 54 other residents of La Grande expressing our concerns regarding the B2H Project and we request that EFSC deny the Site Certificate.

I have also sent a bound copy of this material by the US Postal Service.

Sincerely,

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850



August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the usage of the "Local Streets" <sup>1</sup> specifically the Modelaire-Hawthorne Loop) <sup>2</sup>, hereafter referred to as the "loop", of La Grande to access the site entrance. This residential "loop" was constructed without sidewalks for a new development around the early 1960s.

According to OAR 345-022-0110, Public Services (pg. 5. April 2017) "The applicant...must address all permanent and temporary impacts of the facility on housing, traffic, safety, police and fire protection, health care and schools." <sup>3</sup>

My impression from reviewing the application Page 17 <sup>4</sup> is that the applicant has not fully examined the final portion of the intended route nor does it fully recognize or address the need for traffic mitigation. This "loop" is the only access to/from thirty-six houses to the rest of the city. The area to the north of the "loop" is occupied by the Grande Ronde Hospital and Medical Clinic. Two blocks to the east is located the local high school and a grade school. <sup>2</sup>

In June of 2016, the Grande Ronde Hospital petitioned the City to have a conditional use for a parking lot expansion project next to Hawthorne. The Conditional Use Permit was approved subject to the Condition of Approval that "No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to residential standards and is not designed to support commercial traffic." <sup>5</sup>

The La Grande Director of Public Works, Kyle Carpenter, provided information regarding the widths for the streets in question. The two streets range from 33 feet to 37 feet in width with no sidewalks. I personally measured the area where the unpaved stem of Hawthorne leaves the "loop" to go up the hill. At the junction it measures 32 feet curb cut to curb cut and narrows to 18-21 feet in width as it goes around the corner up the hill. 6 The Public Works Director also provided pictures of the mapping system showing the existing utilities located in the "loop". 7-8. It should also be noted that from the entrance to the "loop" at Sunset Drive to the entrance of the site the road has a 16% grade.

Attachment U2 9 from the application shows an "Aerial Lift Crane to be Used During Construction" and the Transportation and Traffic Plan on page 19 10 lists a number of other vehicles anticipated to be used. Article 6.6 — Public Street Standards for the City of La Grande Section 6.6.002 states that "Collector Streets are designed to withstand normal trucks of an HS20 loading. Larger trucks are to utilize Arterial Streets where at all possible." 11 The majority of vehicles listed on page 19 exceed that limit and would be using a Local Street in addition to Arterial and Collector Streets. According to the Public Works Director the two streets in the "loop" were designed as Local Streets for residential use, able to accept the pressures of HS20 for the purpose of an occasional need such as a weekly garbage truck or an emergency vehicle but for no more than 5% of the time. The paving construction of these over 50 year old streets in the "loop" was not designed for repetitive use by vehicles heavier than a normal car. These streets in the "loop" have not been repaved, only patched when necessary, since they were first constructed.

The application does not address the "loop" specifically, but 3.1.2 (pg. 19) 10 and Table 6 (pg.17) 12 of the Transportation and Traffic Plan indicate there would be numerous vehicles using this route. Not knowing exactly just which vehicles would be on the "loop" daily but making a conservative estimate of 50 round trips (100 single) it would be a constant parade with one truck every 7.2 minutes. This is unacceptable for numerous reasons including constant excessive noise.

Not only would weight of the vehicles be a problem but the narrowness of the "loop" streets and the ninety degree blind curves that would have to be executed would be either impossible or extremely dangerous considering the turning radius for many of these large vehicles. The



already dangerous situation for a number of driveways that exit onto these "loop" streets at blind curves would be exacerbated. 13-14

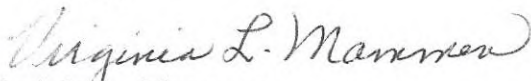
When considering only the traffic and safety issues listed above, the use of the "loop" as a part of the route for Idaho Power seems to be not only dangerous for the residents but unconscionable and irresponsible for Idaho Power to use such streets that are currently primarily for the neighborhood for walking (children to school, all ages for physical training), driving, or biking. I fear there are standards that are either not being considered or they are intentionally being ignored. There should be some common sense, courtesy and respect for the impact this project would impose on any neighborhood.

Finally, La Grande Ordinance Number 3077, which adopted Oregon State Traffic Laws by reference, states in Section 17 page 8 "It shall be unlawful for any person, firm or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes." Neither Modelaire/Hawthorne Loop nor Sunset Drive are posted as truck routes. 15-16

A site review and traffic plan must be completed prior to the cite certificate being issued and not 90 days prior to construction as stated.

For the above reasons I oppose the usage of the proposed route for the construction of the B2H transmission line.

Sincerely,

  
Virginia L. Mammen  
405 Balsa  
La Grande, Oregon. 97850

gmammen@eoni.com

**TABLE 1  
 STREET STANDARDS**

Functional Classification	ADT Volume	Speed (mph)	# of Travel Lanes	Travel Lane Width	Turn Lane or Median Width	Bike Lanes	Min. Bike Lane Width	On-Street parking
Downtown Arterial	10,000	20	2-3	11'	11'			both sides
Arterial	10,000	40-55	2-5	12'	4-14'	optional <sup>4</sup>	5'	none
Major Collector	2,000 - 10,000	25-45	2-3	11'	12'	required	5'	one or both sides
Minor Collector	1,000 - 2,000	25-35	2	11'	none	Optional <sup>5</sup>	5'	one or both sides
Local Street	0 - 1,000	15-25	2	10'	none	none	none	one or both sides

Functional Classification	Sidewalks	Min. Sidewalk Width	Planting Strip Width <sup>1</sup>	Total Paved Width <sup>2</sup>	Total ROW Width <sup>3</sup>	Private Access Spacing
Downtown Arterial	required	12'	3'6" <sup>6</sup>	49'	80'	200'
Arterial	required	5'	8'	36'-72'	80'-102'	200' - 400'
Major Collector	required	5'	8'	52'-60'	62'-90'	150' - 300'
Minor Collector	required	5'	8'	30'-48'	60'-78'	75' - 150'
Local Street	required	5'	8'	28'-36'	40'-66'	Each Lot

<sup>1</sup>A portion of the required planting strip width may be used instead as additional sidewalk width or reduced right of way, as appropriate.

<sup>2</sup>The minimum of the paved width was calculated with the following assumptions:

Arterials: Two (2) travel lanes, four foot (4') median divider, no center turn lane, no bike lanes.

Major Collectors: Two (2) travel lanes, two (2) bike lanes, no center turn lane, parking on one (1) side.

Minor Collectors: Two (2) travel lanes, parking on one (1) side of street, no bike lanes.

Local Streets: Two (2) travel lanes, parking on one (1) side of street.

The maximum paved width for each street was calculated assuming the inclusion of all required and optional facilities. Minimum paved widths for each street are as required in Section 6.2.005 of this Code.

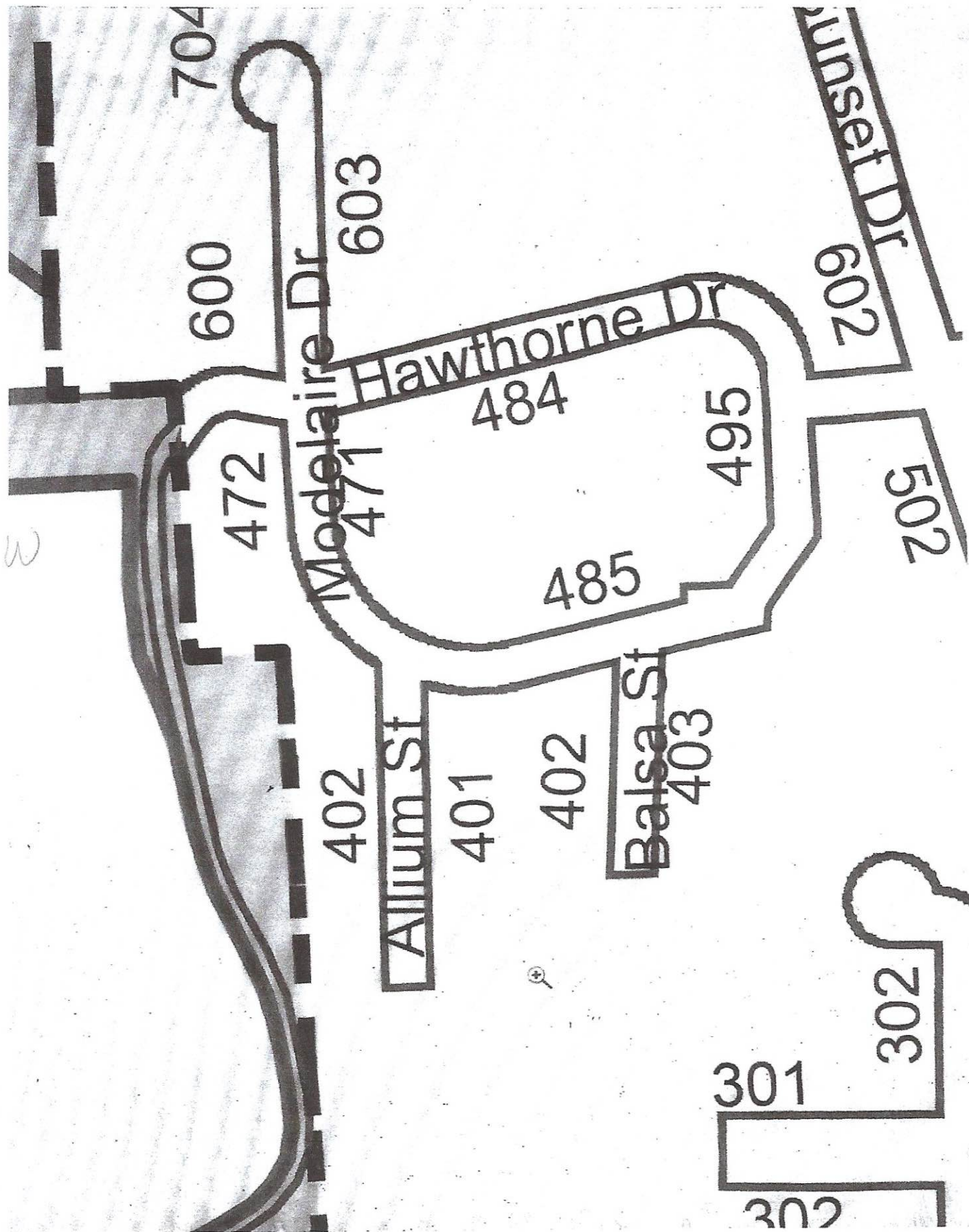
<sup>3</sup>These right-of-way width ranges are for new streets.

<sup>4</sup>Bike lanes should be provided on Arterials unless more desirable parallel facilities are designated and designed to accommodate bicycles.

<sup>5</sup> Bike lanes should be provided on Minor Collectors where traffic volumes or other factors warrant. Otherwise, Minor Collectors should be designed and designated as shared roadway facilities with wide outside travel lanes of 14' on important bike routes.



N



5



## Public Services

### OAR 345-022-0110

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## Waste Minimization

### OAR 345-022-0120

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## Need for a Facility

### OAR 345-023-0005

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## Specific Standards for Wind Facilities

### OAR 345-024-0010 and 345-024-0015

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## Specific Standards for Transmission Lines

### OAR 345-024-0090

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





Idaho Power Responses to Comments and Requests for Additional Information on the B2H APASC  
from the City of La Grande  
Compiled by ODOE. RAI's from the City of La Grande and Responses from IPC

U	U- Public Services include utilities such as road systems, water, sanitation services, power, and other amenities necessary for the construction.	Ordinance #2912, Series 1997 gives the City jurisdiction and control on all City street rights-of-way and Ordinance #3077, Series 2009, establishes the process and requirements for permits and licenses for uses of the streets that are not normal uses and may result in damages.	proposed helipad is a necessary supporting facility.	<p>The project construction has two major road systems through La Grande that are proposed for this project – Morgan Lake Road via Gekeler Lane, 'C' Avenue, Walnut Street, and on up Morgan Lake Road. Roads along these routes are used by the ambulance service for accessing the hospital, the public transit system on its normal daily route, citizens to access locations within and outside this area and also for the school bus system for transporting kids to the La Grande Middle School, La Grande High School and Central Elementary School. In addition to the vehicular modes of travel, those routes are heavily used by bicyclists and pedestrians. The other route that would be utilized is the same route with the exception of turning onto Sunset Drive and up Hawthorne Street to a private gravel road that heads up the area above Deal Canyon. Two other routes that are not addressed but that would be obvious access routes for construction would be South 12th Street and South 20th Street. As a general rule, City streets are built with ninety degree angles, which may restrict some</p> <p>To address the City's concerns regarding traffic and road use within the city's limits, Idaho Power has added the following proposed conditions to Exhibit K:</p> <p><u>Land Use Condition 9: Prior to construction in Union County, the site certificate holder shall complete the following to address traffic impacts in the county:</u></p> <p><u>a. The site certificate holder shall finalize, and submit to the department for its approval, a final county-specific transportation and traffic plan. The protective measures described in the draft Transportation and Traffic Plan in ASC Exhibit U, Attachment U-2, shall be included and implemented as part of the final county-specific plan, unless otherwise approved by the department;</u></p> <p><u>b. The site certificate holder shall work with the Union County Road Department and the City of La Grande Public Works Department to identify concerns related to Project construction traffic; and</u></p> <p><u>c. The site certificate holder shall develop traffic control measures to mitigate the effects of Project construction traffic;</u></p> <p><u>Land Use Condition 26: During construction in Union County, the site certificate holder shall conduct all work in compliance with the Union County-specific</u></p>
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#### IV. CONCLUSIONS

Based on the Findings of Fact above, the Planning Commission concludes that the application meets the requirements established in LDC Articles 8.5 and other applicable codes and Ordinances.

#### V. ORDER AND CONDITIONS OF APPROVAL

Based on the conclusions above, the Planning Commission approves the Conditional Use Permit as requested, subject to the following Conditions of Approval:

1. No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to a residential standards and is not designed to support commercial traffic.
2. Any existing driveway curb cuts along Hawthorn Drive bordering GRH's property, that are not used for residential purposes, shall be removed and replaced with City standard improvements that exists adjacent to such areas.
3. There is a storm sewer line extending through the project area that shall to be protected. Any improvements that may affect the storm sewer line shall be reviewed and approved by the Public Works Director.

#### VI. STANDARD CONDITIONS OF APPROVAL FOR LAND USE APPLICATIONS

1. **Revisions to a Valid Conditional Use Permit:** Any variations, alterations, or changes in a valid Conditional Use Permit requested by the deed holder shall be considered in accordance with the procedures of the Land Development Code as though a new Conditional Use Permit were being applied for.
2. **Public Works Standards:** Where a development involves work within the public right-of-way, a Right-of-Way Permit shall be obtained from the Public Works Department in advance of commencing with any work in the right-of-way. All improvements within the public right-of-way shall be in conformance with the most recent adopted City of La Grande *"Engineering Standard Drawings and Specifications for Construction Manual."*
3. **Building Permits:** The City of La Grande Building Department shall be contacted early in the process and in advance of development to coordinate and obtain required building, plumbing, electrical and/or mechanical permits. All required permits shall be acquired in advance of construction.

#### VI. OTHER PERMITS AND RESTRICTIONS

The applicant and property owner is herein advised that the use of the property involved in this application may require additional permits from the City of La Grande or other local, State or Federal Agencies.

The City of La Grande land use review, approval process and any decision issued does not take the place of, or relieve the applicant of responsibility for acquiring such other permits, or satisfy any restrictions or conditions thereon. The land use decision herein does not remove, alter, or impair in any way the covenants or restrictions imposed on this property by deed or other instrument.

The land use approvals granted by this decision shall be effective only when the rights granted herein have been exercised and commenced within one (1) year of the effective date of the decision. In case such right has not been exercised and commenced or an extension obtained, the approvals granted by this decision shall become null and void. A written request for an extension of time shall be filed with the Planning Department at least thirty (30) days prior to the expiration date of the approval.





Virginia Mammen &lt;4gmammen@gmail.com&gt;

**Modelaire Roadway Specifications**

3 messages

**Kyle Carpenter** <KCarpenter@cityoflagrande.org>  
To: "gmammen@eoni.com" <gmammen@eoni.com>

Fri, Jul 12, 2019 at 1:51 PM

I have attached a couple pictures of our mapping system that will give you a sense of where existing utilities are in Modelaire and Hawthorne. As for the widths of the roadways, I took measurements in multiple places, and found the following:

- Modelaire Drive (F Avenue) between Sunset Blvd and Hawthorne Drive is approximately 33 feet wide with a grade of about 5 Percent.
- Hawthorne Drive is approximately 32 feet wide at the bottom near the intersection of Modelaire/F Avenue and widens to about 34 feet where it intersects Modelaire at the top of the hill. The grade heading up hill is approximately 15.5 Percent.
- Modelaire Drive is generally 36 feet wide with some minor variability generally less than a foot (35' to 37'). On the southernmost segment of the roadway where the majority of the elevation gain is observed the grade is approximately 16 Percent.

Let me know if there are any other specifications of these roadways that you are interested in that I have missed. Have a great weekend and thanks for the treats, the guys were very appreciative.

*Kyle Carpenter, PE*

**Public Works Director**

**City of La Grande**

**Public Works**

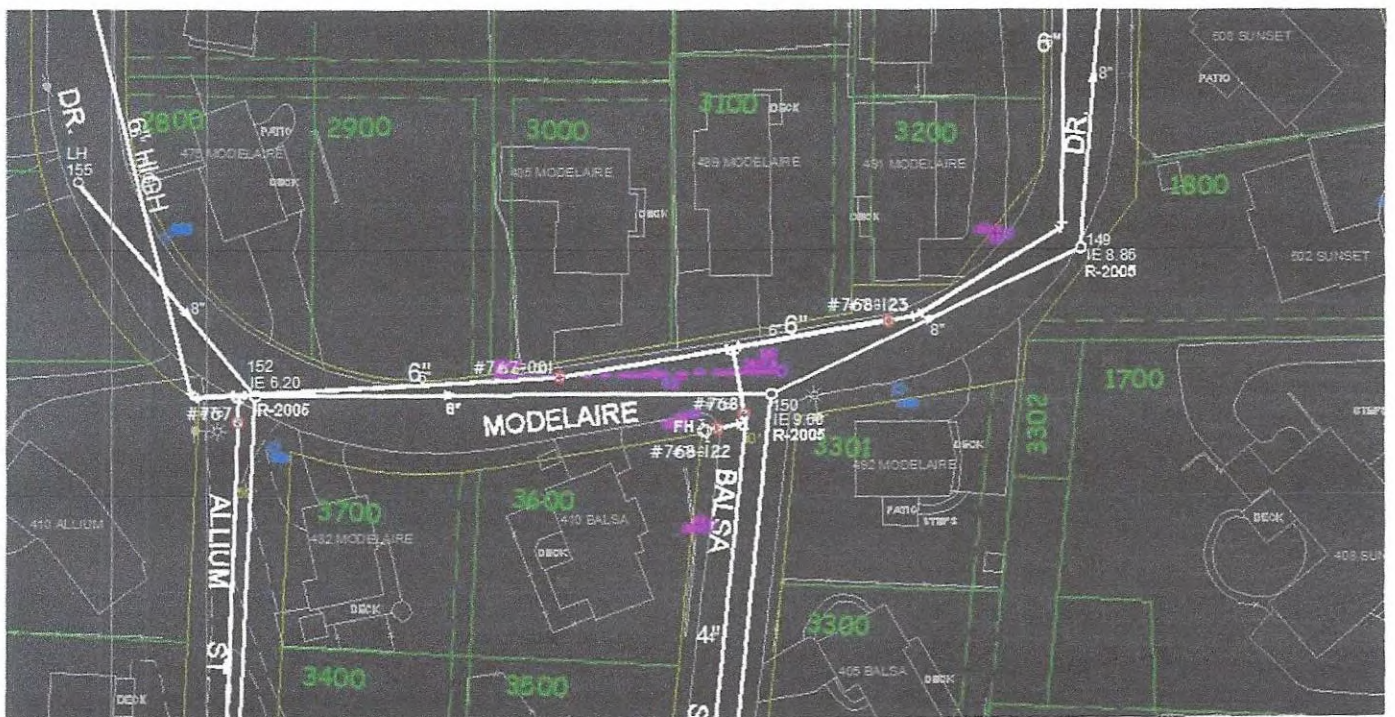
Ph: (541) 962-1325

Fax: (541) 963-4844

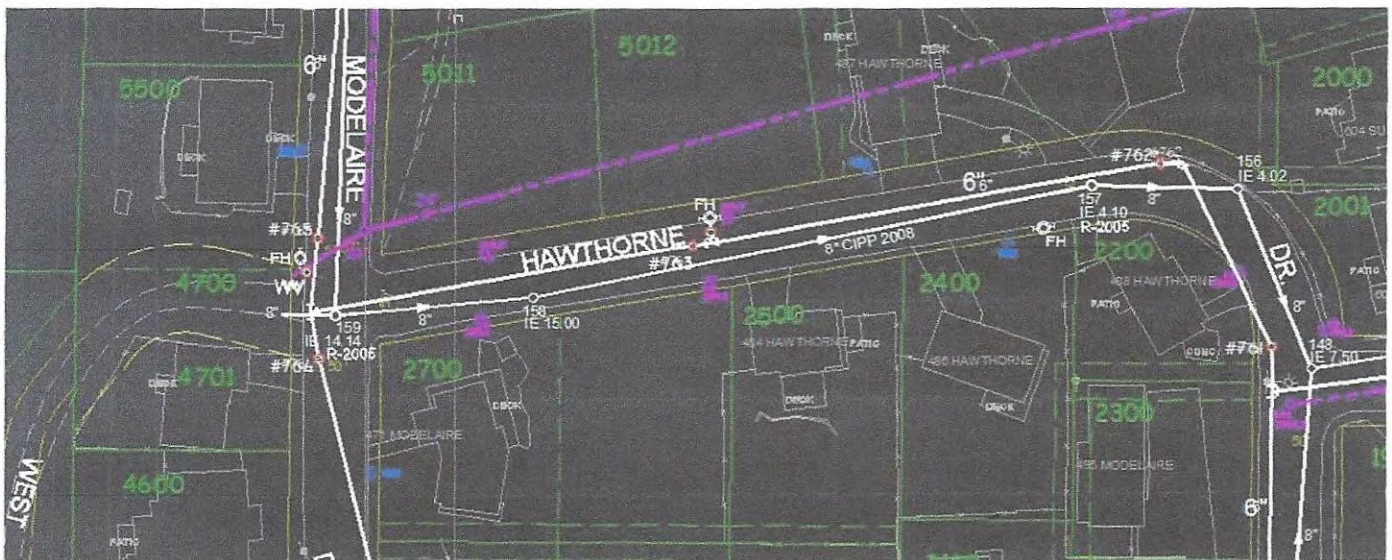
**2 attachments**

**Hawthorne.jpg**  
150K

**Modelaire.jpg**  
120K







attachment U2

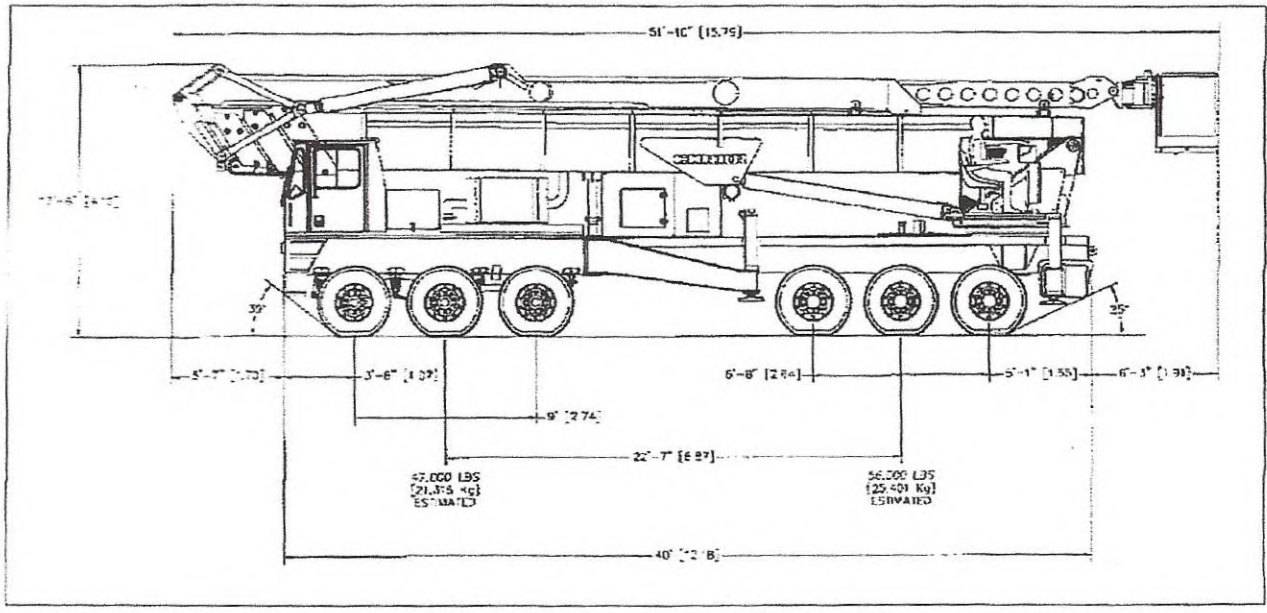


Figure 2. Example Aerial Lift Crane to be Used During Construction (Roadable Length 52 Feet; Width 8 Feet 6 Inches)



The following is a summary of anticipated equipment to be used for each transmission-line construction activity.

- Survey work: pickup trucks or ATVs.
- Timber removal: pickup trucks, feller bunchers, dump trucks, wood chippers.
- Road construction: pickup trucks, bulldozers, motor graders, and water trucks.
- Hole digging, installation of directly embedded structures, or foundation installation: pickup trucks, 2-ton trucks, digger derrick trucks, hole diggers, bulldozers, concrete trucks, water trucks, cranes, hydro cranes, wagon rock drills, dump trucks, and front-end loaders.
- Hauling lattice steel members, tubular poles, braces, and hardware to the structure sites: steel haul trucks, carry alls, cranes, and forklifts.
- Assembly and erection of structures: pickup trucks, 2-ton trucks, carry alls, cranes, and a heavy lift helicopter.
- Wire installation: pickups, wire reel trailers, diesel tractors, cranes, 5-ton boom trucks, splicing trucks, three drum pullers, single drum pullers, tensioner, sagging dozers, carry-alls, static wire reel trailers, bucket trucks, and a light duty helicopter.
- Final cleanup, reclamation, and restoration: pickup trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, hydro-seed truck, and water trucks.

The highest level of traffic will be when the wire stringing operations begin while several other operations are occurring at the same time, which will likely include ROW clearing, installing foundations, hauling steel, and assembling and erecting structures. For the station work, the highest level of traffic will be during site grading and foundation installation. For the communication station sites, the highest level of traffic will be during grading and site preparation.

Detailed estimates of trips generated by transporting Project construction equipment will be provided by the construction contractor prior to construction.

### **3.1.3 Traffic Related to Timber Removal**

In forested areas, the Project will require removal of timber from the Project ROW and for construction and improvement of access roads. Specific timber harvest plans have not been finalized. Logs from timber clearing may be transported to nearby sawmills. Decisions regarding transportation routes for harvested timber will be made following completion of a timber harvest plan, and the number of log truck trips will be estimated when the timber harvest plan has been finalized. Logging slash will remain onsite if possible. For additional discussion regarding removal of timber in forested areas, see Exhibit K, Attachment K-2, ROW Clearing Assessment.

### **3.1.4 Impacts to V/C Ratios**

Based on the estimated trip generation numbers in Tables 4 and 6, a maximum of approximately 1,294 daily one-way vehicle trips are expected within any one construction spread. To facilitate traffic and other analyses, the two construction spreads are divided into smaller sections based on similar construction windows and seasonal weather restrictions. Not all construction sections will have the same number of concurrent construction activities, depending on how the construction contractor sequences and executes the Project. Some sections will have fewer daily vehicle trips. For the purposes of the traffic analysis, the spreads are divided into five sections with multi-use areas that could have additive traffic impacts. The sections are assumed to have approximately equal levels of activity. The 1,294 daily one-way trips per spread divided over five sections of more concentrated traffic results in 259 daily one-

## **ARTICLE 6.6 – PUBLIC STREET STANDARDS**

### **SECTION 6.6.001 - PURPOSE**

Upon the request of the La Grande City Council, a variety of street design standards have been reviewed and are now incorporated in the Land Development Code.

### **SECTION 6.6.002 - CLASS I IMPROVEMENT STANDARDS**

This classification will cover those streets that are designed to meet the standards for an expected life of twenty (20) years or more. The attached drawings shall be the minimum standard for those streets in this classification. All streets designated as Federal Aid Urban Streets (F.A.U.) shall be constructed under these design standards. Streets in this designation shall be constructed with sidewalks when at all possible in an effort to increase pedestrian safety. Collector streets are designed to withstand normal trucks of an HS 20 loading. Larger trucks are to utilize Arterial streets where at all possible. This level of development shall be the ultimate goal for all streets within the City of La Grande.

Possible means of financing available for this Class shall be methods A, B, C, D, E, F, G, and H in Section 6.6.006.

#### **A. Advantages**

1. The construction life is extended to a period above other City standards.
2. The visible aesthetics in relationship to having curbs and a blacktop surface with landscaping or concrete driveways and a sidewalk is generally appealing to the public.
3. Easy maintenance for the Public Works Department for cleaning and minor repair.
4. Storm sewer drainage is confined within the bounds of the curbs during minor flooding periods.
5. Parking is restricted to a solid barrier, that being the curb; this restricts parking in the area on the back side of the curb and confines travel to the street surface.
6. Defined areas for possible cross walks, signs, power poles, and other utilities that are restricted to the outside areas behind the curbs.
7. It allows for a wide range of financing methods and is to City standards for a ten (10) year Bancroft bonding.
8. Provides a dust free surface.

#### **B. Disadvantages**

1. The extreme high level of cost that is incurred with this type of development.

### **SECTION 6.6.003 - CLASS II IMPROVEMENT LEVEL**

Streets constructed in this classification shall be constructed to the same standards as Class I Streets with the exception of the form of drainage system. These streets shall meet the standards as shown on the attached drawing. This level of construction shall be only utilized in substitution for Class I Streets when it is determined by the City Council at the recommendation of the City Engineer or Engineering Superintendent, that an adequate drainage system cannot be installed for a Class I Street.



Table 6. Construction Vehicle Trips per Day per Construction Spread

Construction Crew Type	Construction Vehicles					
	Light Construction Vehicles			Heavy Construction Vehicles		
	Number of Pickups/ Mechanic Trucks (per day)	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)	Number of Other Vehicles	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)
Substation Construction	20	2	40	5	2	10
ROW Clearing	9	4	36	5	4	20
Roads/ Pad Grading	9	4	36	9	2	18
Foundations	9	2	18	5	8	40
Tower Lacing (assembly)	27	2	54	0	0	0
Tower Setting (erection)	20	2	40	0	0	0
Wire Stringing	9	4	36	9	4	36
Restoration	3	2	6	0	0	0
Blasting	5	4	20	0	0	0
Material Delivery	20	8	160	12	2	24
Mechanic and Equipment Mgmt.	5	6	30	0	0	0
Refueling	0	0	0	5	4	20
Dust Control	0	0	0	5	4	20
Construction Inspection	5	8	40	0	0	0
Concrete Testing	5	4	20	0	0	0
Environmental Compliance	9	6	54	0	0	0
Surveyors	5	3	30	0	0	0
<b>Totals</b>	—	—	<b>620</b>	—	—	<b>188</b>

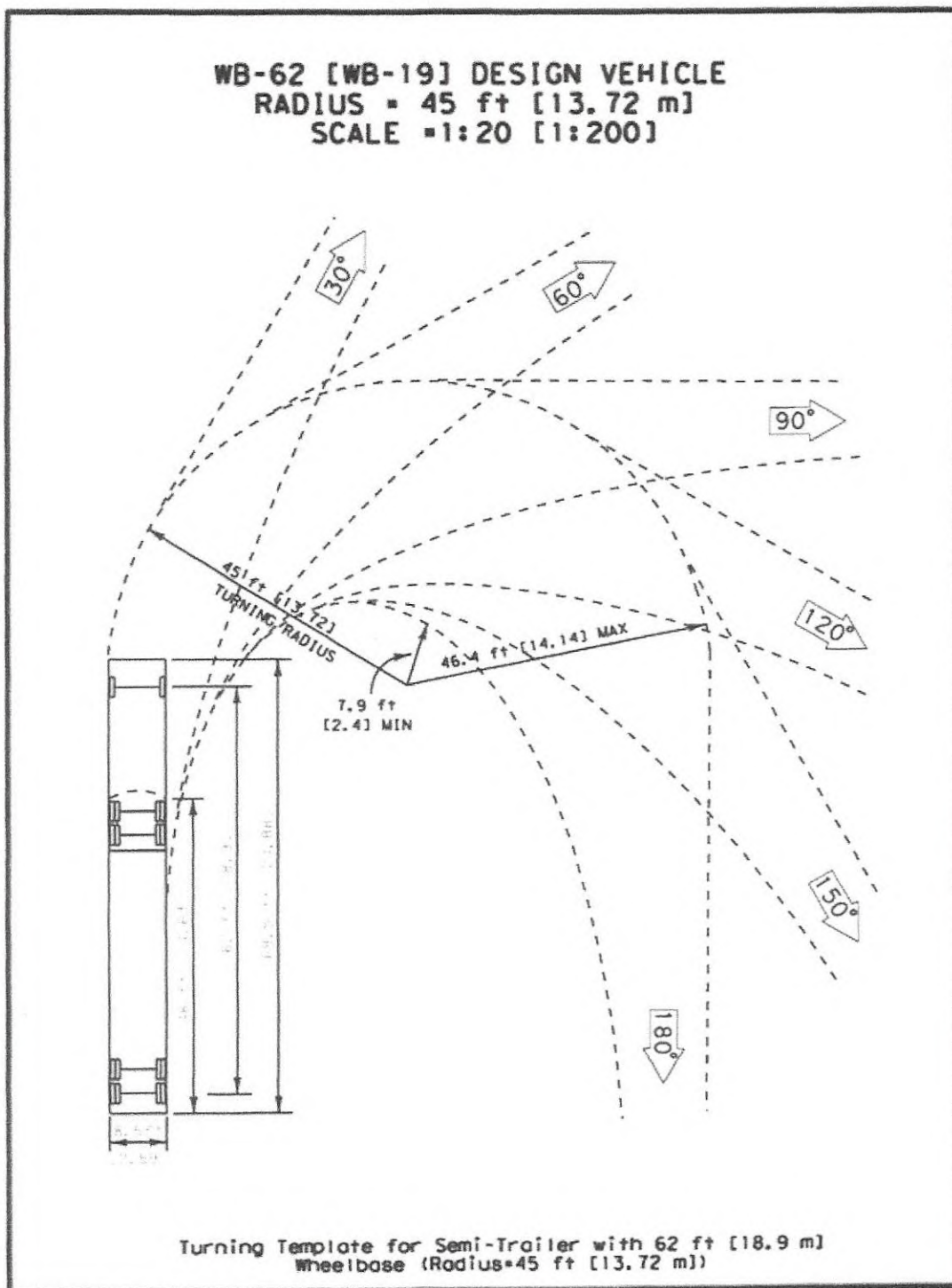
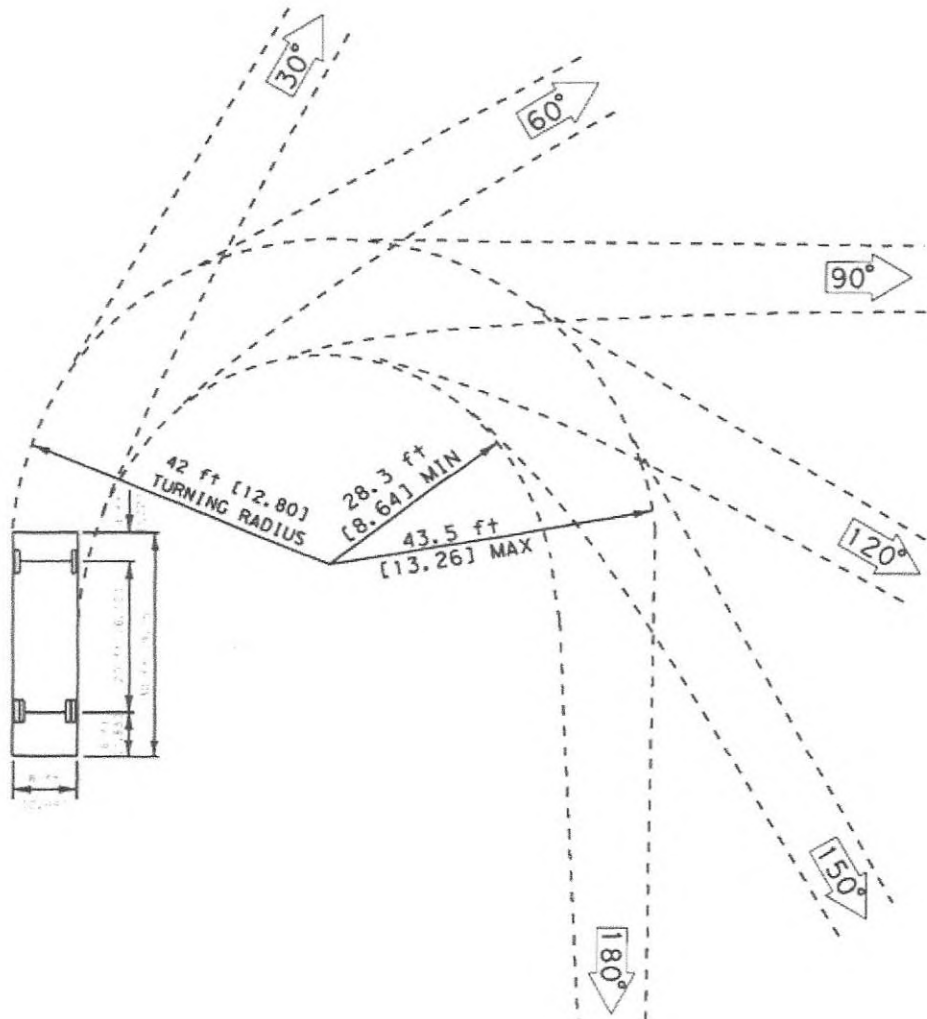


Figure 7-4. Turning Template for Semi-Trailer with 62 ft [18.9 m] Wheelbase, (not to scale). Click [here](#) to see a PDF of the image.



**SINGLE UNIT (SU) TRUCK DESIGN VEHICLE**  
**TURNING RADIUS = 42 ft [12.80 m]**  
**SCALE = 1:20 [1:200]**



Turning Template for Single Unit Trucks or Buses

Exhibit 15

**CITY OF LA GRANDE  
ORDINANCE NUMBER 3077  
SERIES 2009**

**AN ORDINANCE CONTROLLING VEHICULAR AND PEDESTRIAN TRAFFIC, PARADES  
AND PROCESSIONS AND ISSUANCE OF PERMITS; PROVIDING PENALTIES; AND  
REPEALING ORDINANCE NUMBER 2845, SERIES 1993; ALL AMENDING ORDINANCES  
AND ALL OTHER ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HERewith;  
AND DECLARING AN EFFECTIVE DATE**

THE CITY OF LA GRANDE ORDAINS AS FOLLOWS:

**Section 1.** This Ordinance may be cited as the City of La Grande Uniform Traffic Ordinance.

**Section 2.** APPLICABILITY OF STATE TRAFFIC LAWS.

Oregon Revised Statutes, Chapter 153, and the Oregon Vehicle Code, ORS Chapter 801 and 822, as now constituted, are adopted by reference. Violation of an adopted provision of those chapters is an offense against the City.

**Section 3.** DEFINITIONS

In addition to those definitions contained in the Oregon state Motor Vehicle Code, the following words or phrases, except where the context clearly indicates a different meaning, shall mean:

a. Alley

A street or highway primarily intended to provide access to the rear or side of lots or buildings in urban areas and not intended for through vehicular traffic.

b. Bicycle

A bicycle is a vehicle that:

1. Is designed to be operated on the ground on wheels;
2. has a seat or saddle for use of the rider;
3. is designed to travel with not more than three (3) wheels in contact with the ground;
4. is propelled exclusively by human power; and,
5. has every wheel more than fourteen inches (14") in diameter or two (2) tandem wheels, either of which is more than fourteen inches (14") in diameter.

c. Bicycle Lane

That part of the highway, adjacent to the roadway, designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

d. Bicycle Path

A public way, not part of a highway, which is designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

e. Block

The part of one side of a street lying between the two (2) nearest cross streets.

f. Central Business District



a. City Regulation of Special Movement of Oversized Load

The applicant shall submit an application to the City Manager or designee, showing the terminal points of the purported movement; the proposed route; the nature of the movement requested, including the weight and dimensions of the vehicle, load, machine, building, or structure to be moved; the time, date and duration of the proposed movement.

b. Special Movement Permit

A permit shall be required to move any vehicle, structure, or load on, or to access a street when, after preparation for movement, the vehicle, structure or load exceeds fourteen feet (14') in height, requires the use of guy wires, or could result in the blockage of a street. An approved application may serve as a permit, and a copy of the approved application shall be provided to the applicant.

**Section 17. TRUCK ROUTES**

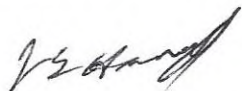
- a. It shall be unlawful for any person, firm, or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes.
- b. Any vehicle with a gross weight over 26,000, pounds specifically picking up deliveries or making deliveries to any business or residence located on a street that is not a truck route will be exempted if the vehicle is driven from the truck route to the destination in the shortest, most direct, and safest route.
- c. The use of Jacob brakes shall not be allowed within the city limits of La Grande, Oregon.
- d. Truck routes will be posted as follows:
  1. Walnut street north from the city limits to C Avenue;
  2. C Avenue east from Walnut Street to Gekeler Avenue;
  3. Gekeler Avenue east to the city limits;
  4. 12th street south from Gekeler Avenue to the city limits;
  5. 2nd Street south from the city limits to Adams Avenue;
  6. Monroe Avenue east from Spruce Street to Highway 82;
  7. Jackson Avenue east from Spruce Street, and
  8. Spruce Street south from the city limits to Monroe.

**Section 18. IMPOUNDMENT AND DETENTION OF VEHICLES**

- a. Whenever a vehicle is placed in a manner or location that constitutes an obstruction to traffic or a hazard to public safety, a police officer or enforcement officer shall order the owner or operator of the vehicle to remove said vehicle. If the vehicle is unattended, the officer or enforcement officer may cause the vehicle to be towed and stored at the owner's expense. The owner shall be liable for the costs of towing and storing, notwithstanding that the vehicle was parked by another or that the vehicle was initially parked in a safe manner but subsequently became an obstruction or hazard.

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE



PRINTED NAME James E. Howell II

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SIGNATURE



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EMAIL d.janehowell@gmail.com

SIGNATURE

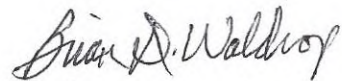


PRINTED NAME Lisa Waldrop

ADDRESS 475 Modelaire Dr.

EMAIL ldjw62@gmail.com

SIGNATURE

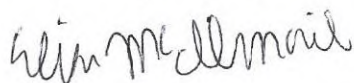


PRINTED NAME BRIAN D. WALDROP

ADDRESS 475 MODELAIRE DR.

EMAIL bdwaldrop58@gmail.com

SIGNATURE



PRINTED NAME EUSE MCILMAIL

ADDRESS 476 MODELAIRE DR.

EMAIL mcilmail154@hotmail.com




I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

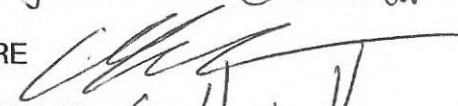
  
Jessie Huxell  
472 Modelaire Dr. LaGrande OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

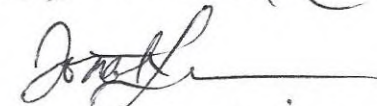
  
C. Huxell  
472 Modelaire Dr. LG, OR 97850  
CHRIS Huxell @ EMAIL.COM

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blakebars@gmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*D. Dale Mammen*

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D. Dale Mammen

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*John Garutz*

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John Garutz


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484 Hawthorne LG, OR 97850


EMAIL





I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE   
PRINTED NAME Andrea Gulzow  
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EMAIL foreverfamily33@aol.com

SIGNATURE   
PRINTED NAME Frances E. Lillard  
ADDRESS 471 Modelaire Dr. L.G.  
EMAIL

SIGNATURE   
PRINTED NAME Brent H. Smith  
ADDRESS 410 Allium St  
EMAIL smithbrent@gmail.com

SIGNATURE   
PRINTED NAME M. Jeannette Smith  
ADDRESS 410 Allium Street  
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SIGNATURE   
PRINTED NAME KIMBERLEY HEITSTUMAN  
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EMAIL kimheitstuman@hotmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE: 

PRINTED NAME Shawn K. Mangum

ADDRESS 2905 E. M. Ave,

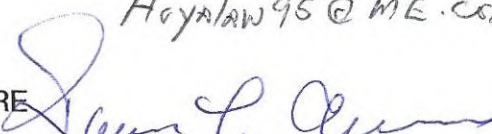
EMAIL Hoyanaw95@ME.com

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
CONNIE L. ALLEN 541-9637720  
410 BALSA STREET LAGRANDE, OREGON 97858  
N/A

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

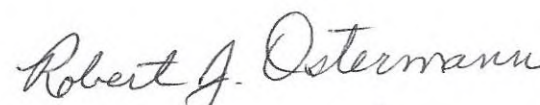
  
Linda Snyder  
491 Modelaire Dr

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL


  
Robert J. Ostermann  
495 Modelaire Dr. La Grande, OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

  
Robin J. Ostermann  
495 Modelaire Dr La Grande, OR 97850



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*Jonathan D. White*

PRINTED NAME

Jonathan D. White

ADDRESS

485 Modelaire Dr

EMAIL

jondwhite418@gmail.com

SIGNATURE

*Robin Stedfeld*

PRINTED NAME

Robin Stedfeld

ADDRESS

485 Modelaine Dr. La Grande

EMAIL

rstedfeld@yahoo.com

SIGNATURE

*Rita Allen*

PRINTED NAME

Rita Allen

ADDRESS

410 Balsa St. La Grande Or.

EMAIL

SIGNATURE

*Ruth Schumacher Yeates*

PRINTED NAME

Ruth Schumacher Yeates

ADDRESS

408 Sunset Drive La Grande, OR 97850

EMAIL

ruthschumacheryeates@gmail.com

SIGNATURE

*John Yeates*

PRINTED NAME

JOHN YEATES

ADDRESS

408 SUNSET DR. LA GRANDE, OR 97850

EMAIL

jyeates52@gmail.com

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SIGNATURE 

PRINTED NAME LOIS BARRY

ADDRESS P.O. Box 566, La Grande, OR 97850

EMAIL loisbarry31@gmail.com

SIGNATURE 

PRINTED NAME CATHY WEBB

ADDRESS 1708 CEDAR ST. LAGRANDE, OR 97850

EMAIL thunkski@gmail.com

SIGNATURE 

PRINTED NAME Jack L. Martin


ADDRESS 1412 Gilcrest Dr. LaGrande

EMAIL Buff Martin 27 @GMail.com

SIGNATURE 

PRINTED NAME GERALDINE BRASETH-PALMER

ADDRESS 1602 GILCREST DRIVE LA GRANDE, Ore 97850

EMAIL 

SIGNATURE 


PRINTED NAME Jean BAPH


ADDRESS 1509 MADISON AVE LaGrande, OR 97850

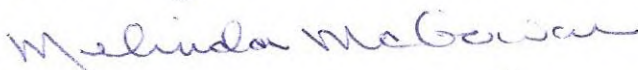
EMAIL JBaph19@gmail.com





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SIGNATURE   
PRINTED NAME Damon Sexton  
ADDRESS 401 Balsa St La Grande, OR 97850  
EMAIL Sexton.damon@gmail.com

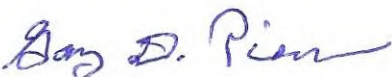
SIGNATURE   
PRINTED NAME Cory Sexton  
ADDRESS 401 Balsa Street La Grande OR 97850  
EMAIL Corytrix@gmail.com

SIGNATURE   
PRINTED NAME Melinda McGowan  
ADDRESS 602 Sunset Dr.  
EMAIL melindamegowan@gmail.com

SIGNATURE   
PRINTED NAME Keith D. Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL Keithdhudson@gmail.com

SIGNATURE   
PRINTED NAME Laura Elly Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL ellyhudson@gmail.com

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SIGNATURE 

PRINTED NAME Gary D. Pierson

ADDRESS 489 Modelaire Drive, La Grande OR 97850

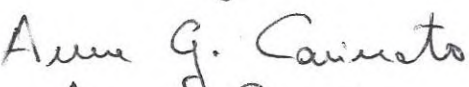
EMAIL —

SIGNATURE 

PRINTED NAME LYNN WHEELER DUNCAN

ADDRESS 489 Modelaire Drive, La Grande OR 97850

EMAIL rlwd1910@gmail.com

SIGNATURE 

PRINTED NAME Anne G. Cavinato

ADDRESS 86 Hawthorne Dr. La Grande, OR 97850

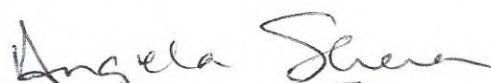
EMAIL acavinat@ecu.edu

SIGNATURE 

PRINTED NAME JOE HORST

ADDRESS 86 HAWTHORNE DR. LA GRANDE OR.

EMAIL joehorst@comi.com

SIGNATURE 

PRINTED NAME ANGELA Sherer

ADDRESS 91 W. Hawthorne Dr. LaGrande, OR 97850

EMAIL asherer@frontier.com



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SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
ADDRESS 97 W Hawthorne Dr, La Grande, Or. 97850  
EMAIL asherer@frontier.com

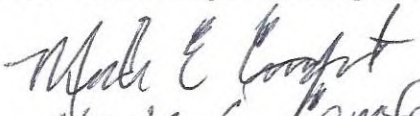
SIGNATURE *Heather M. Null*  
PRINTED NAME Heather M. Null  
ADDRESS 492 Modelaire Dr. La Grande, OR 97850  
EMAIL hnull@comi.com

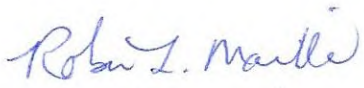
SIGNATURE *Bert R. Frewing*  
PRINTED NAME Bert R. Frewing  
ADDRESS 709 South 12<sup>th</sup> Street La Grande, OR 97850  
EMAIL jeanfrewing@gmail.com


SIGNATURE *Lindsey McCullough*  
PRINTED NAME Lindsey McCullough  
ADDRESS 406 Balsa St., La Grande, OR 97850  
EMAIL lindz\_mm91@hotmail.com


SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

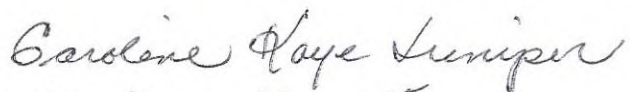
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SIGNATURE   
PRINTED NAME MERLE E. COMFORT  
ADDRESS 209 SCORPIO DRIVE LA GRANDE OR 97850  
EMAIL merlecomfort@gmail.com

SIGNATURE   
PRINTED NAME Robin Maille  
ADDRESS 401 Cedar St., La Grande  
EMAIL r-maille@icloud.com

SIGNATURE   
PRINTED NAME Bruce C Kevan  
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EMAIL bruce.kevan@lagrandesd.org

SIGNATURE   
PRINTED NAME CAROL S. SUMMERS  
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EMAIL carolsummers1938@gmail.com

SIGNATURE   
PRINTED NAME Caroline Kaye Juniper  
ADDRESS 406 NTH St. LaGrande - OR 97850  
EMAIL



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SIGNATURE *Gerald D. Juniper*  
PRINTED NAME *Gerald Darwin Juniper*  
ADDRESS *406 4<sup>th</sup> St. LaGrande, OR. 97850*  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:28 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposal Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.14.06.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter sign by me and 46 other residents of La Grande expressing our concerns regarding the B2H Project and requesting that EFSC Deny the Site Certificate.

I have also sent a bound copy of this material by US Postal Service.

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850



August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, Oregon. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the predicted noise levels resulting from construction and operation of the proposed Boardman to Hemingway Transmission Line Project. I would like to address the noise coming from the blasting and rock breaking specifically above the area at the top of Modelaire Drive 1 both to the north and the south of that area and also the construction traffic noise that that will impact the west hills and the area below.

In Exhibit X page X-9 3.3.1.1 2 blasting and rock breaking is mentioned saying that "Modern blasting techniques include the electronically controlled ignition of multiple small explosive charges in an area of rock that are delayed fractions of second, resulting in a total event that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140dBA at the blast location or over 90 dBA within 500 feet." This sounds oh so "don't worry about it, it will be OK just over in a split second." Living in this area off Modelaire Drive, I don't find this at all comforting. And the fact that this will be overseen by properly licensed personnel and all of the necessary authorizations doesn't help anything either.

The area in question, which for such inordinate construction is extremely close to many residents, has been my home for over 50 years and during

related medical problems and exhibit various reactions to loud noises.<sup>10</sup>  
These children also live in the neighborhoods to be affected by the noise so they would be impacted coming and going to school, at home and also while at school. To impose the constant possibility of loud noises is cruel, disrespectful and totally unacceptable. <sup>11</sup>

For a project like this involving blasting and heavy machinery noise so close to homes, schools, and medical facilities impacting hundreds of peoples' daily lives, the day to day agitation, wondering what is coming next, fear and being on constant alert are not just addressed by some type of mitigation but must be addressed by a route that is much less impactful to peoples' safety, sanity, and health.

Sincerely,

A handwritten signature in cursive script that reads "Virginia L. Mammen".

Virginia L. Mammen

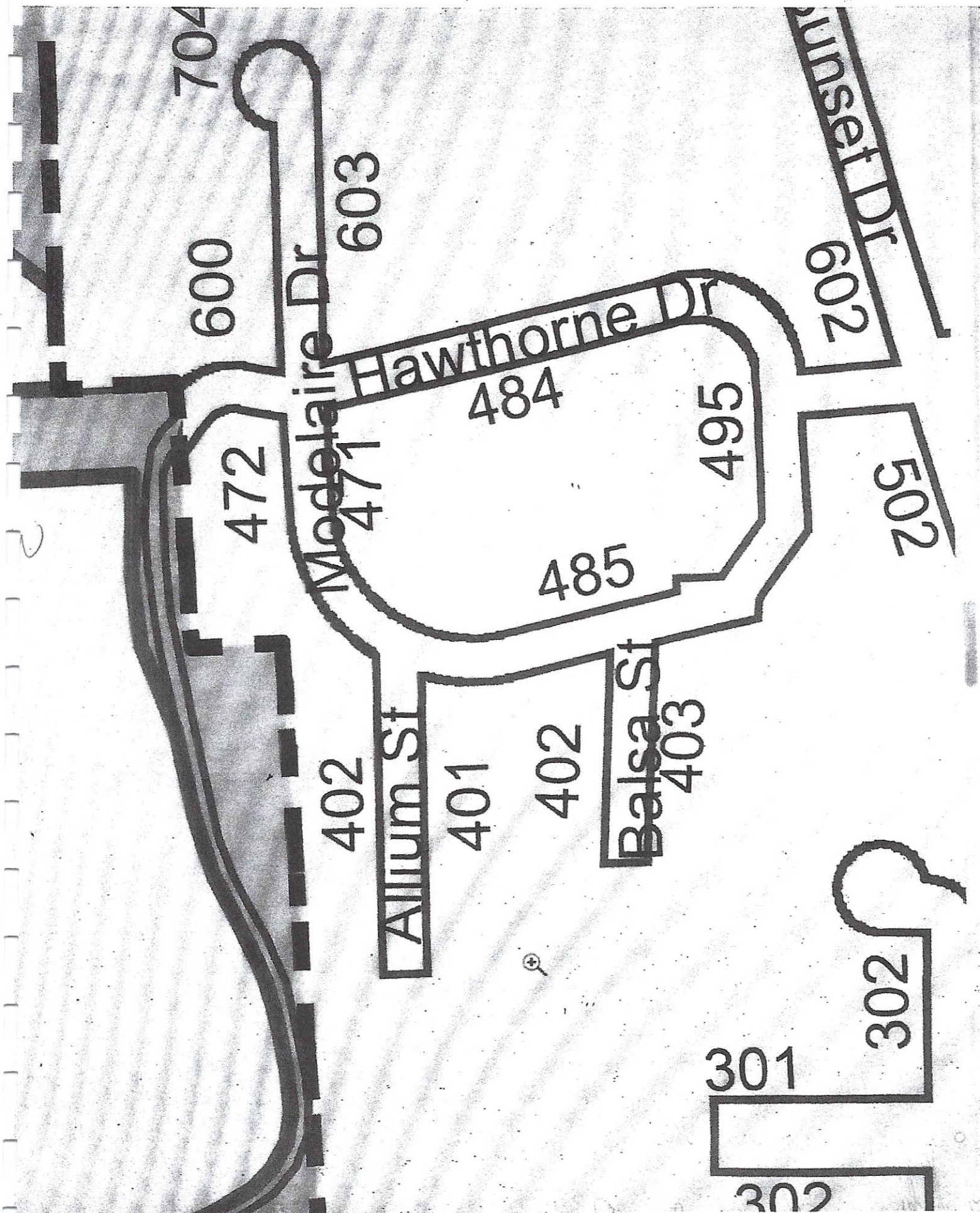
405 Balsa

La Grande, Oregon 97850

gmammen@eoni.com



N





### 3.3 Predicted Noise Levels

OAR 345-021-0010(1)(x)(A): Predicted noise levels resulting from construction and operation of the proposed facility.

#### 3.3.1 Construction Noise

##### 3.3.1.1 Predicted Construction Noise Levels

Project construction will occur sequentially, moving along the length of the Project route, or in other areas such as near access roads, structure sites, conductor pulling sites, and staging and maintenance areas. Overhead transmission line construction is typically completed in the following stages, but various construction activities may overlap, with multiple construction crews operating simultaneously:

- Site access and preparation
- Installation of structure foundations
- Erecting of support structures
- Stringing of conductors, shield wire, and fiber-optic ground wire

The following subsections discuss certain construction activities that will periodically generate audible noise, including blasting and rock breaking, implosive devices used during conductor stringing, helicopter operations, and vehicle traffic.

#### **Blasting and Rock Breaking**

Blasting is a short-duration event as compared to rock removal methods, such as using track rig drills, rock breakers, jackhammers, rotary percussion drills, core barrels, or rotary rock drills. Modern blasting techniques include the electronically controlled ignition of multiple small-explosive charges in an area of rock that are delayed fractions of second, resulting in a total event duration that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140 dBA at the blast location or over 90 dBA within 500 feet.

Lattice tower foundations for the Project typically will be installed using drilled shafts or piers; however, if hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture the rock to reach the required depth to install the structure foundations. Final blasting locations will not be identified until an investigative geotechnical survey of the analysis area is conducted during the detailed design.

The contracted blasting specialist will prepare a blasting plan that demonstrate compliance with applicable state and local blasting regulations, including the use of properly licensed personnel and the acquisition of necessary authorizations. The Framework Blasting Plan is set forth in Exhibit G, Attachment G-5.

#### **Implosive Devices**

An implosive conductor splice consists of a split-second detonation with sound and flash. Implosive splicing activities are anticipated to be limited to daytime hours. A blasting plan will be developed by an individual certified and licensed to perform the work. The plan will communicate all safety and technical requirements including, but not limited to, delineation of the controlled access zone and distance away from residences.



## **Public Services**

### **OAR 345-022-0110**

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## **Waste Minimization**

### **OAR 345-022-0120**

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## **Need for a Facility**

### **OAR 345-023-0005**

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## **Specific Standards for Wind Facilities**

### **OAR 345-024-0010 and 345-024-0015**

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## **Specific Standards for Transmission Lines**

### **OAR 345-024-0090**

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





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## Department of Environmental Quality

### Chapter 340

#### Division 35

#### NOISE CONTROL REGULATIONS

**340-035-0035****Noise Control Regulations for Industry and Commerce****(1) Standards and Regulations:**

(a) **Existing Noise Sources.** No person owning or controlling an existing industrial or commercial noise source shall cause or permit the operation of that noise source if the statistical noise levels generated by that source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 7, except as otherwise provided in these rules. [Table not included. See ED. NOTE.]

**(b) New Noise Sources:**

(A) **New Sources Located on Previously Used Sites.** No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies. [Table not included. See ED. NOTE.]

**(B) New Sources Located on Previously Unused Site:**

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b)-(f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

**(iii) For noise levels generated or caused by a wind energy facility:**

(I) The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

(II) The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with wind speed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.

(III) The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

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(2) Compliance. Upon written notification from the Director, the owner or controller of an industrial or commercial noise source operating in violation of the adopted rules shall submit a compliance schedule acceptable to the Department. The schedule will set forth the dates, terms, and conditions by which the person responsible for the noise source shall comply with the adopted rules.

(3) Measurement:

(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

(B) That point on the noise sensitive property line nearest the noise source.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);

(b) Nothing in this rule shall preclude the Department from conducting separate or additional noise tests and measurements. Therefore, when requested by the Department, the owner or operator of an industrial or commercial noise source shall provide the following:

(A) Access to the site;

(B) Reasonable facilities, where available, including but not limited to, electric power and ladders adequate to perform the testing;

(C) Cooperation in the reasonable operation, manipulation, or shutdown of various equipment or operations as needed to ascertain the source of sound and measure its emission.

(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:

(a) Emergency equipment not operated on a regular or scheduled basis;

(b) Warning devices not operating continuously for more than 5 minutes;

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

(d) Sounds resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad only to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; but this exemption does not apply to any standard, control, license, regulation, or restriction necessitated by special local conditions which is approved by the Administrator of the EPA after consultation with the Secretary of Transportation pursuant to procedures set forth in Section 17(c)(2) of the Act;

(e) Sounds created by bells, chimes, or carillons;

(f) Sounds not electronically amplified which are created by or generated at sporting, amusement, and entertainment events, except those sounds which are regulated under other noise standards. An event is a noteworthy happening and does not include informal, frequent, or ongoing activities such as, but not limited to, those which normally occur at bowling alleys or amusement parks operating in one location for a significant period of time;

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment;

(i) Sounds created by lawn care maintenance and snow removal equipment;

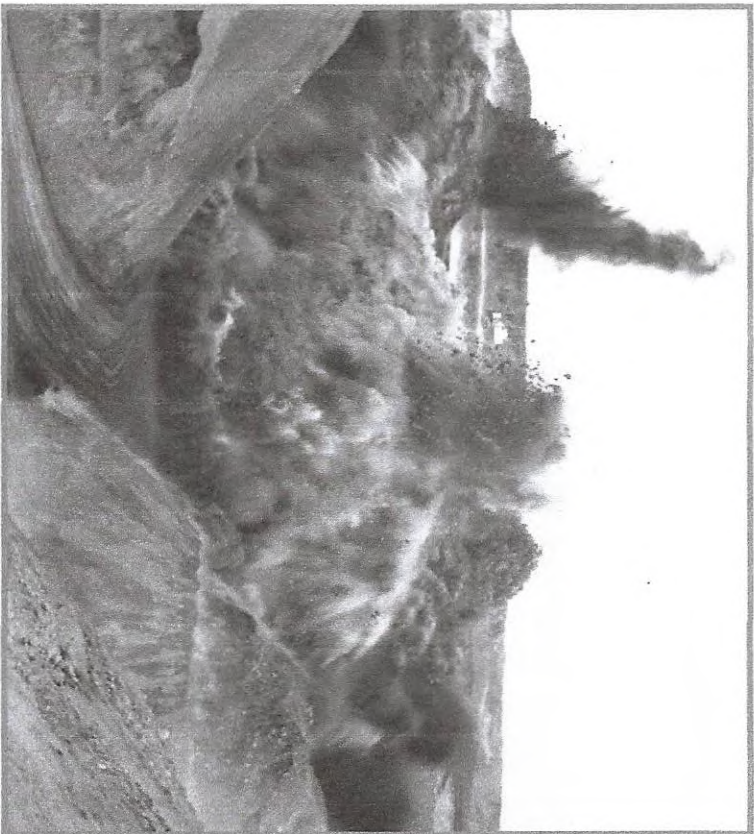
(j) Sounds generated by the operation of aircraft and subject to pre-emptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not pre-emptively regulated by the federal government or controlled under OAR 340-035-0045;

## Controlling the Adverse Effects of Blasting

This module addresses the control of offsite impacts that result from blasting, namely:

- vibrations,
- airblast, and
- flyrock.

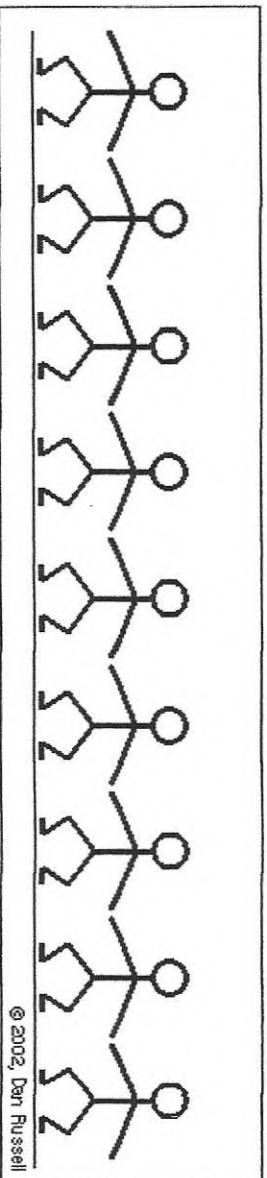
Much of the information in the module is derived from the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The performance standards apply to all surface coal mines. Similar standards have been adopted on some State and local levels and applied to non-coal blasting operations such as quarrying and construction.





## Part I: Ground Vibrations, Airblast, and Flyrock

Explosive energy is used to break rock. However, the use of this energy is not 100-percent efficient. Some of the energy escapes into the atmosphere to generate **airblast or air vibrations**. Some of the energy also leaves the blast site through the surface soil and bedrock in the form of **ground vibrations**.



Both air and ground vibrations create waves that disturb the material in which they travel. When these waves encounter a structure, they cause it to shake. Ground vibrations enter the house through the basement and airblast enters the house through the walls and roof.

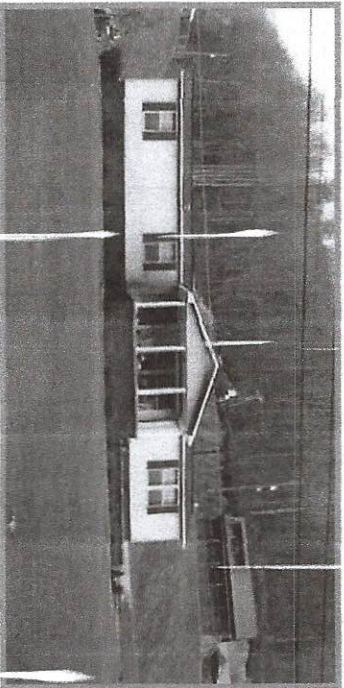
Airblast may be audible (noise) or in-audible (concussion). When outside a house the blast may be heard because of the noise, however noise has little impact on the structure. The concussion wave causes the structure to shake and rattles objects hanging on walls or sitting on shelves. This "interior noise" will alarm and startle people living in the house.

**Flyrock** is debris ejected from the blast site that is traveling through the air or along the ground. Flyrock the single most dangerous adverse effect that can cause property damage and personal injury or death.



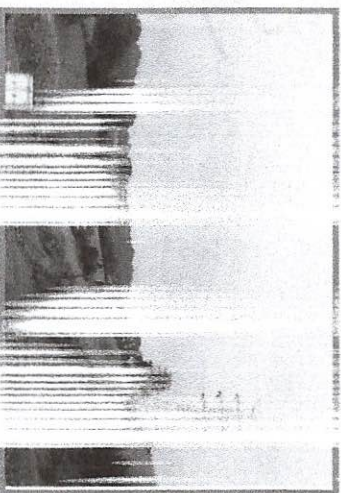
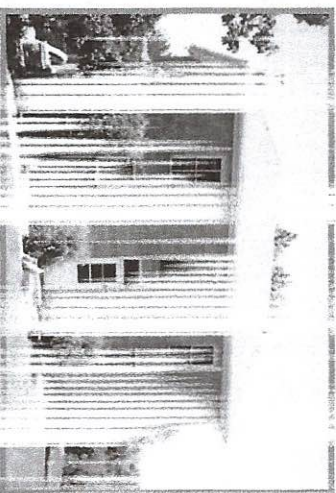
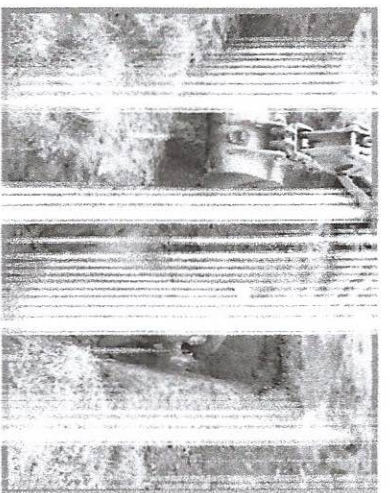
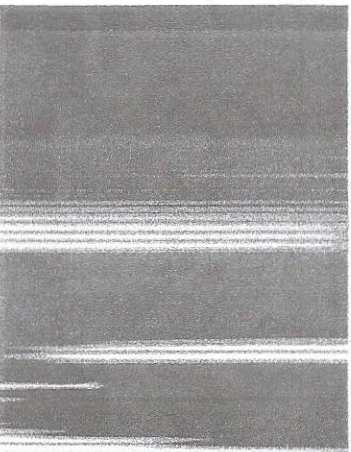
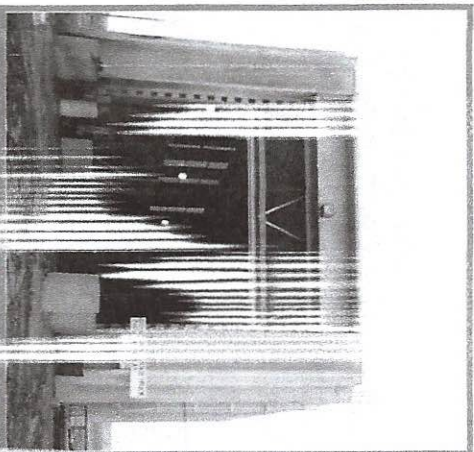
# Blasting Impacts on Structures

Both above-ground and below-ground structures are susceptible to vibration impacts. Structures can include onsite mine offices and buildings, as well as offsite residences, schools, churches, power-transmission lines, and buried pipelines. Some of these structures may include historic or cultural features sensitive to even low levels of vibrations.



It is important to understand:

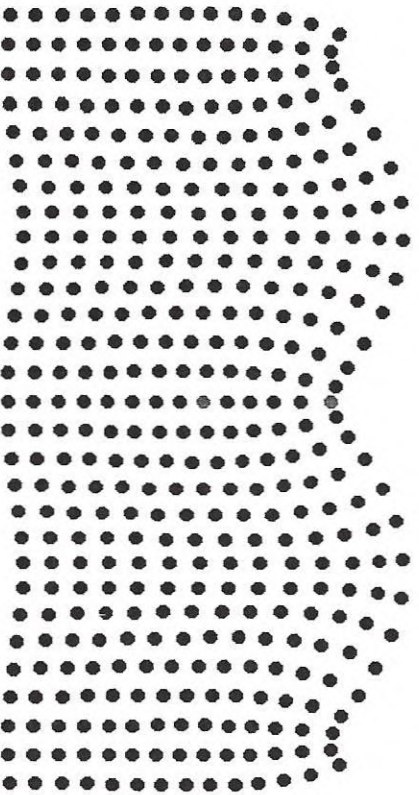
1. the causes of ground vibrations and airblast, and
2. what practices can be followed to control and minimize the adverse effects





# Ground Vibrations

Ground vibrations propagate away from a blast site as Rayleigh (or surface) waves. These waves form a disturbance in the ground that displaces particles of soil or rock as they pass by. Particle motions are quite complicated. At the ground surface (free boundary), measured particle motions have the greatest displacements, and displacements decrease with depth (see the illustration below). At a depth of between 20 to 50 feet below ground surface, particle displacements are barely detectable. Structures that are well coupled to the ground tend to move with this motion; structures buried in the ground are less affected by surface motions.



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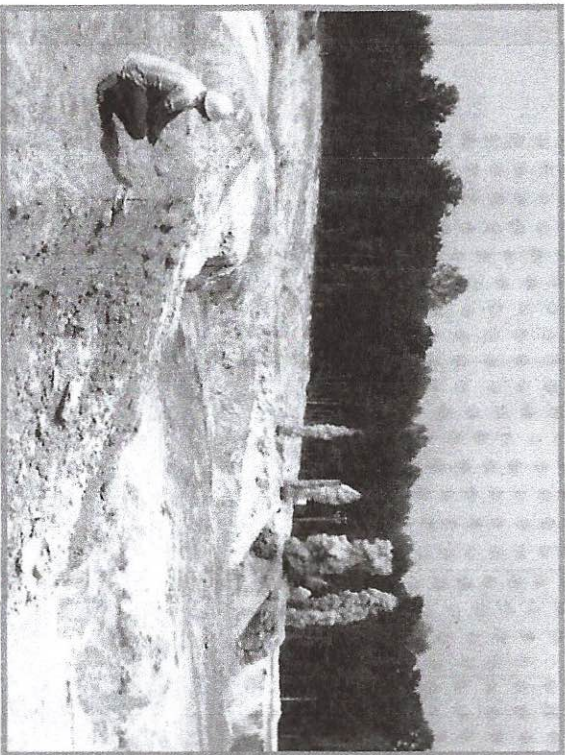
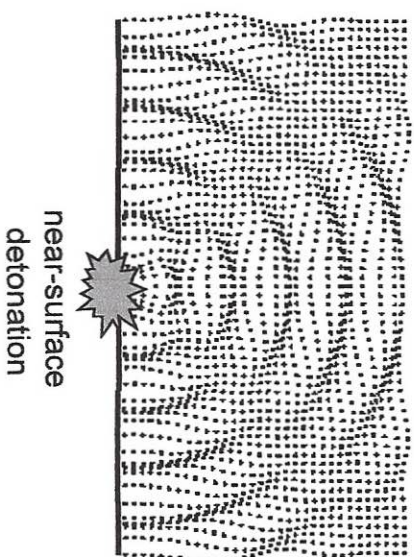
Ground vibrations are measured in terms of **particle velocity** and are reported in inches per second (ips) or the speed at which a particle of soil or rock moves.

At typical blasting distances from residential structures, the ground only moves with displacements equal to the thickness of a piece of writing paper. In terms of displacement, this equates to hundredths of an inch; visually, such movement cannot be detected.

# Airblast

2 Airblast is measured as a pressure in pounds per square  
5 inch (psi) and is often reported in terms of **decibels (dB)**.

Airblast is a pressure wave that that may be audible or in-audible. Elevated airblast levels are generated when explosive energy in the form gases escape from the detonating blast holes. Energy escapes either through the top stemming or through fractures in the rock along the face or at the ground surface.



Airblast radiates outward from the blast site in all directions and can travel long distances. Sound waves travel much slower (1,100 ft/s) than ground vibrations (about 5,000 – 20,000 ft/s). Hence, airblast arrives at offsite structures later than do ground vibrations.

Both ground vibrations and airblast cause structures to shake structures. Occupants in structures that are located far from a blast may experience shaking from vibration and airblast as two separate, closely spaced events. This can be particularly bothersome, as it prolongs the duration of structure shaking and leads the property owner to think that two separate blasts occurred.



# Structure Response

Exhibit 5f

As ground and air vibrations reach a structure, each will cause it to shake. Structure response is dependant on the vibration characteristics (frequency and amplitude) and structure type.

Ground Vibrations enter the house through the basement. This is like shaking the bottom of a flag pole. Movement at the top of the pole depends on how (frequency) and how hard (amplitude) the bottom of the pole is shaken. If shaken at just the right pace, or at the pole's natural frequency, the top will move significantly compared to the bottom. Motion at the top is amplified from the bottom motion.

All blast damage studies have measured incoming ground vibrations at the ground surface. The observed structure amplifications were typically between 1 to 4 times the ground vibration. Structure response below ground level is the same or less than the incoming vibrations

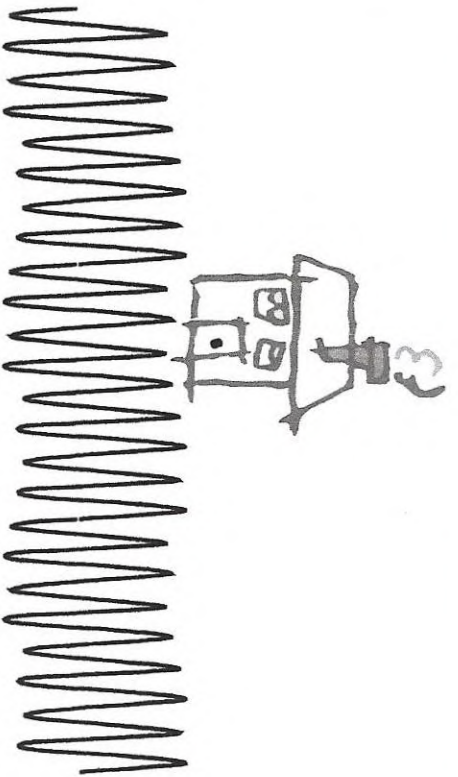
Airblast enters the house through the roof and walls. Like ground vibrations, the frequency and amplitude of the vibrations affect structure response. However the low frequency events (concussion) that most strongly affect structures is normally only a one or two cycle event.

Due to the different arrival times of ground and air vibrations, occupants may feel two distinct impacts on the house.



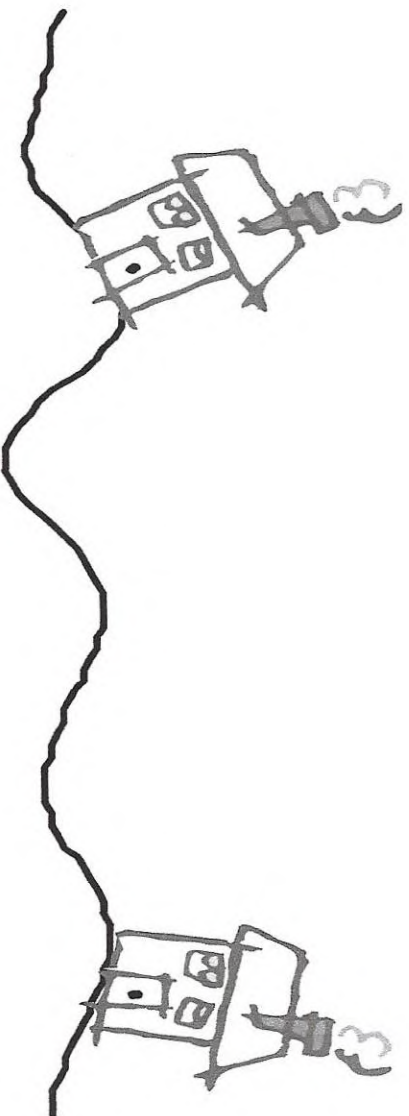
# Ground Vibration Structure Response

Exhibit 59



High frequencies do not promote structure shaking. The length of a single high-frequency wave cycle is short as compared with the dimension of a structure. A structure does not significantly respond to high frequencies.

On the other hand, low-frequency wave cycles are long as compared with the dimensions of structures. Accordingly, low frequencies tend to efficiently couple energy into structures and to promote higher-amplitude, long-duration shaking.





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## A noisy problem

***People often become more sensitive to noise as they age, which can affect their mental and physical health.***

Published: March, 2019



Image: © Juanmonino/Getty Images

Are you more sensitive to noises than you used to be? Do certain sounds now feel too loud and jarring? Don't worry; it's actually quite normal.

Age-related hearing loss is common among older adults and affects about two-thirds of men in their 70s and 85% of men ages 80 and older. Although it's not clear why, this can also make people hypersensitive to sounds that they used to tolerate easily, which in turn can affect their well-being.

"Exposure to noises from crowds, traffic, and other everyday sounds can become harder to tolerate and increase stress levels, leading to anxiety and a reduction in overall quality of life," says Dr. Stephanie Tompkins, an audiologist with Harvard-affiliated Massachusetts Eye and Ear. "As your sensitivity to noises increases, this can lead to greater isolation, too, as you may try to avoid potentially noisy places and situations."



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Quiet in the Hospital: How Noise...

## Quiet in the Hospital: How Noise Reduction Helps Patients Heal

on June 7, 2018 (<https://medcenterblog.uvmhealth.org/innovations/hospital-noise-reduction/>) in Innovation  
(<https://medcenterblog.uvmhealth.org/category/innovations/>) by UVM Medical Center  
(<https://medcenterblog.uvmhealth.org/author/uvmmedcenter/>)

Noise. It is present in almost every aspect of our lives. From the traffic in the streets, to the fan that provides us white noise in the background to sleep, noise exists. Unfortunately, like stress, too much of it can have a negative impact on a person's health and rest. Some sounds we do like to hear, such as birds chirping, signaling spring in Vermont, but what about sounds in a hospital?

Many of us get admitted to hospitals when we are too sick to take care of ourselves at home. We expect exceptional care from physicians and nurses and, of course, to rest in order to help our bodies heal. We understand that some noises in a hospital are necessary for care; however, others simply aren't.

### The Sounds of a Hospital

Many organizations, including the UVM Medical Center, have high tech equipment, which greatly assists in the delivery of care to our patients, but can also be noisy. Sometimes, healthcare providers are the source of the noise as we interact and communicate with our patients and other health team members.

Another factor is visits from families and friends during visiting hours. It is difficult when one's roommate is trying to rest in the opposite bed. Yet, we need to be cognizant of noise in patient care areas as sounds can be magnified and misinterpreted, increasing agitation and even confusion for some patients.

We become accustomed to the noise; our patients are not.

### The Research on Noise, Quiet, and Healing



Research has shown that noise plays a negative role in healing and that decreasing noise in patient care areas aids in healing processes and helps facilitate speedier recoveries for patients. Patients are able to heal, sleep better and recover more quickly when able to rest. A quieter environment can also help decrease burnout for hospital staff.

Studies show that patients are more likely to develop negative side effects from a noisy hospital, such as sleep disturbances, elevated blood pressure and heart rate, and increased use of pain medications.

Noise can also increase annoyance levels for staff. One study indicated noise, such as talking inside and outside patient rooms, is the most common source of noise as well as visitors' voices, TVs, and behaviors of other patients.

Research concluded that best practices to eliminate noise from talking included staff education about noise reduction, public indicators such as sound monitors, a quiet time protocol, and lower cost environmental fixes, such as fixing noisy doors and squeaky wheels. Lastly, by introducing scripting with routine monitoring, patients' perception of quietness increased and the perception of noise decreased.

## How We Address Noise at the UVM Medical Center

We introduced the "Culture of Quiet" Organizational initiative. The Nursing Professional Governance Patient and Family Experience Global council continued this work. After convening a small task force of nurses and assessing current quiet strategies, we introduced the following tactics:

- Many hospital units have designated 'quiet hours' with automatically dimming of lights at quiet hour intervals.
- Signage is visible in most patient care areas to help keep patients, family, and visitors aware. Throughout the hospital, you will see signs with a relaxing pair of Adirondack chairs and the sun setting with details on when a unit has quiet hours.
- Many semi-private rooms have windows in doors, so doors can be closed allowing for patient rest.
- We offer headphones for TVs and earplugs to help minimize sounds.
- In-patient kits contain a sleeping mask and other comfort items that can be provided at time of admission. Each kit contains a card and explains, 'the best healing occurs in a quiet environment.'
- New education material is available for staff, patients and visitors-just ask to review the next time visiting.
- Some units offer white noise machines, others have this built in.
- Noisy equipment such as wheels and doors can be tagged and replaced.
- Our facility and distribution staff have changed their cleaning and supply delivery schedules to accommodate patient care.
- Healthcare teams within the hospital are focusing efforts to cluster patient care to minimize interruptions to provide restful moments.

## How you can help us.

We ask patients and visitors to hold us accountable when sounds are too loud. We want our community to alert us when noise levels are high and we will do what we can to minimize sound. In turn, we ask that all members of the healthcare team, patients, family, and friends be aware to keep voices soft, cell phones on vibrate, and hold each other accountable for these are the times of the day when our patients take pause to rest and positively impact their healing.

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# Dangerous Decibels: Hospital Noise More Than a Nuisance

By Diane Sparacino, Staff Writer

Imagine a world where hospitals have become so noisy that the annoyance has topped hospital complaints, even more than for the tasteless, Jell-O-laden hospital food (Deardorff, 2011). If you're a nurse, you know that we're already there – with noise levels reaching nearly that of a chainsaw (Garcia, 2012). In fact, for more than five decades, hospital noise has seen a steady rise (ScienceDaily, 2005).

But it wasn't always that way. At one time, hospitals were virtually noise-free like libraries – respected spaces, preserved as quiet zones. The culture was such that a loud visitor might be silenced by a nurse's purposeful glare or sharply delivered "Shhh!" As early as 1859, the importance of maintaining a quiet environment for patients was a topic for discussion. In Florence Nightingale's book, "Notes on Nursing," she described needless noise as "the most cruel absence of care" (Deardorff, 2011).

Fast forward to 1995, when the World Health Organization (WHO) outlined its hospital noise guidelines, suggesting that patient room sound levels not exceed 35 decibels (dB). Yet since 1960, the average daytime hospital noise levels around the world have steadily risen to more than double the





acceptable level (from 57 to 72 dB), with nighttime levels increasing from 42 to 60 dB. WHO found that the issue was not only pervasive, but high noise levels remained fairly consistent across the board, despite the type of hospital (ScienceDaily, 2005).

Researchers at Johns Hopkins University began to look into the noise problem in 2003. They maintained that excessive noise not only hindered the ability for patients to rest, but raised the risk for medical errors. Other studies blamed hospital noise for a possible increase in healing time and a contributing factor in stress-related burnout among healthcare workers (ScienceDaily, 2005).

Technology is, of course, partly to blame. State-of-the-art machines, banks of useful alarms, respirators, generators, powerful ventilation systems and intercoms all add up to a lot of unwanted racket. When human voices are added to the mix, (i.e., staff members being forced to speak loudly over the steady din of medical equipment), it's anything but a restful environment. For the recovering patient in need of sleep, that can be a real issue (Deardorff, 2011).

Contributing to the problem, experts say, are the materials used in hospitals. Because they must be easily sanitized, surfaces cannot be porous where they could harbor disease-causing organisms. Rather than using noise-muffling materials like carpet, acoustic tiles and other soft surfaces, hospitals have traditionally been outfitted using smooth, hard surfaces – especially in patient rooms. Good for cleanliness – not so great for dampening sounds, which tend to bounce around the typical hospital (Deardorff, 2011).

Which brings us to the most recent research, published January 2012 in the *Archives of Internal Medicine*. In the report, Jordan Yoder, BSE, from the Pritzker School of Medicine, University of Chicago, and his colleagues associated elevated noise levels with “clinically significant sleep loss among hospitalized patients,” perhaps causing a delay in their recovery time (Garcia, 2012). During the 155-day study period, researchers examined hospital sound levels. The numbers far exceeded (WHO) recommendations for average hospital-room noise levels, with the peak noise at an average 80.3 dB – nearly as loud as a chainsaw or electric sander (85 dB), and well over the recommended maximum of 40 dB. And while nights tended to be quieter, they were still noisier than recommended allowances, with “a mean maximum sound level of 69.7 dB” (Garcia, 2012).

Perhaps most interestingly, the researchers broke down the sources of noise into categories: “Staff conversation (65%), roommates (54%), alarms (42%), intercoms (39%), and pagers (38%) were the most common sources of noise disruption reported by patients” (Garcia, 2012). “Despite the importance of sleep for recovery, hospital noise may put patients at risk for sleep loss and its associated negative effects,” they wrote. In addition, researchers found that the intensive care and surgical wards had some work to do in dampening noise levels, with ICU peaking at 67 dB and 42 dB for surgical areas. Both far exceeded WHO’s 30 dB patient room recommendation (Garcia, 2012).

Besides patient sleep deprivation, which itself can lead to a multitude of health problems including high blood sugar, high blood pressure and fatigue, studies have reported that elevated noise levels can increase heart and respiratory rates, blood pressure and cortisol levels. Recovery room noise causes patients to request more pain medication, and preterm infants “are at increased risk for hearing loss, abnormal brain and sensory development, and speech and language problems when exposed to prolonged and excessive noise” (Deardorff, 2011).

There is still more research to be done, of course, but Yoder and his colleagues had good news, as well; much of the hospital noise they identified is modifiable, suggesting that hospitals can take steps to successfully create a quieter environment for both patients and healthcare providers (Garcia, 2012).

Around the country, "quiet campaigns" have been launched by hospitals in an attempt to dampen nighttime noise. Besides dimming lights and asking staff to keep their voices down at night, they are working to eliminate overhead paging systems, replace wall and/or floor coverings – even the clang of metal trashcans. Northwestern's Prentice Women's Hospital in Chicago was built with noise reduction in mind, replacing the idea of centralized nursing stations with the advent of smaller, multiple stations (Deardorff, 2011)

Billed as "one of the nation's largest hospital construction projects," Palomar Medical Center in North San Diego County is a state-of-the-art facility that has been designed "to encourage quietness," according to Tina Pope, Palomar Health Service Excellence Manager. Slated to open its doors this August, the hospital will feature a new nursing call system to route calls directly to staff and help eliminate the need for overhead paging, de-centralized nursing stations and clear sig lines, allowing staff to check on patients without having to leave unit doors open. With measures already in place including "Quiet Hospital" badges on staff and posters at the entrance of every unit, a "Quiet at Night" campaign (9 p.m. – 6 a.m.), and a "Quiet Champions" program that encourages staff to report noise problems, Palomar is one of a growing number of hospitals working toward a new era of quiet.

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## Noises Are Truly Horrible For People Who Have PTSD

20 Mar '2018 [Sound](#)

Noise is a really big issue for PTSD survivors: people who have mental health problems because of their traumas. How are they connected?

Almost everybody has experienced a trauma. But some traumas are more scarring than others and can even result in long-lasting mental disorders like **PTSD**, which can have an extreme impact on someone's life. It's a disorder that can develop in the brain after a horrifying experience, like war or a car crash.

### Symptoms

The symptoms of PTSD are, to say the least, not pleasant. They range from nightmares about the traumatic events, disturbing thoughts and feelings, anxiety, trying to avoid anything that has something to do with the traumatic event, and an increase in the fight-or-flight response.

Around ten percent of the population suffers from PTSD, according to data from **NCBI**, a part of the US National Library of Medicine. And, remarkably enough, that percentage is the same for people who suffer from tinnitus (the sound of a constant beep in your ears). The NCBI clearly sees a link between the two.

PTSD survivors also suffer from the Exaggerated Startle Syndrome, with anxiety and actions in an extreme and irrational way too loud noises and bangs. And then there are the sounds that remind them of the sounds during the traumatic events, which can trigger memories of the





## Fear

PTSD can also cause a general fear of sounds: phonophobia, or a fear of some specific sounds: misophonia. Survivors of the disorder also are generally much more sensitive to sounds and perceive them as much louder than other people would.

All of this makes the life of people with PTSD very hard. If you think you are suffering from this, consult your doctor. Really, please do it. For yourself, and for the ones you love.

Do you have PTSD and would you like to tell your experiences to us? We are always very open and interested to hear what you have to say. And again: if you haven't done it yet, visit your doctor, please. Thank you!

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Front Psychol. 2013; 4: 578.

PMCID: PMC3757288

Published online 2013 Aug 30. doi: [10.3389/fpsyg.2013.00578](https://doi.org/10.3389/fpsyg.2013.00578)

PMID: [24009598](https://pubmed.ncbi.nlm.nih.gov/24009598/)

## Does noise affect learning? A short review on noise effects on cognitive performance in children

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### Abstract

The present paper provides an overview of research concerning both acute and chronic effects of exposure to noise on children's cognitive performance. Experimental studies addressing the impact of acute exposure showed negative effects on speech perception and listening comprehension. These effects are more pronounced in children as compared to adults. Children with language or attention disorders and second-language learners are still more impaired than age-matched controls. Noise-induced disruption was also found for non-auditory tasks, i.e., serial recall of visually presented lists and reading. The impact of chronic exposure to noise was examined in quasi-experimental studies. Indoor noise and reverberation in classroom settings were found to be associated with poorer performance of the children in verbal tasks. Regarding chronic exposure to aircraft noise, studies consistently found that high exposure is associated with lower reading performance. Even though the reported effects are usually small in magnitude, and confounding variables were not always sufficiently controlled, policy makers responsible for noise abatement should be aware of the potential impact of environmental noise on children's development.

**Keywords:** noise, cognitive performance, cognitive development, children, speech perception, listening comprehension, irrelevant sound effect, classroom acoustics



In everyday life, cognitive tasks are often performed in the presence of task-irrelevant environmental noise. Accordingly, numerous studies on noise effects on performance have been conducted since the middle of the 20th century (for reviews see Hellbrück and Liebl, 2007; Szalma and Hancock, 2011), showing that—depending on characteristics of sounds and tasks—noise of low to moderate intensity may in fact evoke substantial impairments in performance.

Most of these studies were conducted with adults. The present review, however, will focus on studies including children. Children are especially vulnerable to harmful effects of environmental noise, as cognitive functions are less automatized and thus more prone to disruption. We will report findings concerning effects of acute noise on performance in concurrent auditory and non-auditory tasks, as well as effects of chronic noise on children's cognitive development.

### Effects of acute noise on children's performance in auditory tasks

Psychoacoustic studies have consistently shown that children's speech perception is more impaired than adults' by unfavorable listening conditions. The ability to recognize speech under conditions of noise or noise combined with reverberation improves until the teenage years (Johnson, 2000; Wightman and Kistler, 2005; Talarico et al., 2007; Neuman et al., 2010). With stationary noise makers, signal-to-noise ratios (SNRs) have to be 5–7 dB higher for young children when compared to adults in order to achieve comparable levels of identification of speech or nonspeech signals, with adult-like performance reached at about 6 years of age (Schneider et al., 1989; Fallon et al., 2000; Werner, 2007). However, with maskers that vary over time, i.e., with trial-by-trial variation of the maskers' spectral composition (Oh et al., 2001; Hall et al., 2005; Leibold and Neff, 2007) or with fluctuating maskers such as single-talker speech (Wightman and Kistler, 2005), adult-like performance is usually not reached before the age of 10 years. Furthermore, children are less able than adults to make use of spectro-temporal and spatial cues for separation of signal and noise (Wightman et al., 2003; Hall et al., 2005). These findings demonstrate that children are especially prone to *informational* masking, i.e., masking that goes beyond energetic masking predicted by filter models of the auditory periphery.

Studies identified a range of linguistic and cognitive factors to be responsible for children's difficulties with speech perception in noise: concerning the former, children are less able than adults to use stored phonological knowledge to reconstruct degraded speech input. This holds for the level of individual phonemes, as children's phoneme categories are less well specified than adults' (Hazan and Barrett, 2000), but also for the lexical level since children's phonological word representations are more holistic and less segmented into phoneme units. Therefore the probability of successfully matching incomplete speech input with stored long-term representations is reduced (Nittrouer, 1996; Metsala, 1997; Mayo et al., 2003). In addition, young children are less able than older children and adults to make use of contextual cues to reconstruct noise-masked words presented in sentential context (Elliott, 1979). Concerning attention, children's immature auditory selective attention skills contribute to their difficulties with speech-in-noise perception. Children's susceptibility to informational masking has been attributed to deficits in focusing attention on auditory channels centered on signal frequencies, while ignoring nonsignal channels (Wightman and Kistler, 2005). Behavioral and ERP measures from dichotic listening paradigms provide evidence that auditory selective attention improves throughout entire childhood (Doyle, 1973; Pearson and Lane, 1991; Coch et al., 2005; Wightman et al., 2010; Gomes et al., 2012).

Owing to the mediating role of linguistic competence and selective attention, children with language or attention disorders are still more impaired than normally developing children by noise in speech perception tasks (Geffner et al., 1996; Ziegler et al., 2005, 2009). A stronger noise effect is also evident for children tested in their second language when compared to native children (Crandell and Smaldino,



# Autism & Anxiety: Parents seek help for extreme reaction to loud noise

September 5, 2018

*Our 12-year-old son has autism, mild intellectual disability and anxiety attacks so severe that we end up in the emergency room. Loud noises are the worst – for example the school fire alarm, thunderstorms, a balloon popping, fireworks. Any help would be greatly appreciated.*



*This week's "Got Questions?" answer is by Judy Reaven, a clinical psychologist and associate professor of psychiatry and pediatrics at the University of Colorado School of Medicine and Children's Hospital Colorado, in Denver. Dr. Reaven's conducted research on the effectiveness of cognitive-behavioral therapy for anxiety in adolescents with autism, with the support of an [Autism Speaks research grant](#).*

***Editor's note: The following information is not meant to diagnose or treat and should not take the place of personal consultation, as appropriate, with a qualified healthcare professional and/or behavioral therapist.***

Thanks for the great question. It certainly sounds like your family is experiencing a very difficult situation. Anxiety symptoms and reactions are very common in individuals with autism spectrum disorder (ASD). They can interfere with functioning across home, community and school settings.

Although your son's reaction sounds more severe than most, many people with autism struggle with a range of fears, phobias and worries. These can range from a debilitating fear of, say, spiders or the dark to chronic anxiety about making mistakes or being late.

Fortunately, recent research suggests that anxiety in children and adults who have autism is quite treatable. Often, these individuals are helped by the same or similar strategies that work well in treating anxiety in the general population.

These approaches include cognitive behavior therapy, or CBT. Cognitive-behavioral approaches are well-established, evidenced-based treatments that have become the gold standard of psychosocial treatments for anxiety. [My own research](#) and that of my colleagues has demonstrated the helpfulness of modifying cognitive-behavioral approaches to address the special needs of those who have autism.

Where to begin?

You describe a number of fears that may be related to sensory sensitivities. I recommend that you begin by consulting an occupational therapist who can assess whether your son's extreme sensitivities to noises are part of a broader sensory processing disorder. If this is the case, and if your son's fears are exclusively triggered by sensory stimuli, then his symptoms may be best addressed by a sensory-focused intervention. Many occupational therapists who specialize in autism receive special training in this area.

It's common for children with ASD and anxiety to become extremely frightened in response to sensory stimuli. Perhaps – like many individuals with autism – your son also has difficulty telling you what's scaring him. Instead, he may show his fear with extreme avoidance of a situation.

For example, he might refuse to go to school after a fire drill. He might become fearful of birthday parties after being frightened by a balloon that popped unexpectedly. Other signs of extreme distress can include yelling, crying, clinging and general agitation. Because your son may have difficulty communicating, it's important to observe his behavior for these signs of distress. This can help you determine what's triggering his fears.

#### Avoidance versus learning to cope

Many parents go to great pains to protect their children by avoiding agitating situations. This approach is sometimes appropriate and even necessary. However, it denies individuals the opportunity to learn how to manage anxiety-provoking situations on their own.

By helping your son learn to manage his fear, you can prepare him for an unpredictable world so that he can participate in it to the maximum extent possible.

Given the severity of your son's anxiety symptoms, I suggest that you seek professional support in addition to the strategies offered here. Families whose children have milder symptoms of anxiety can try these strategies on their own – seeking professional help if symptoms worsen.

#### Tackling one fear at a time

I suggest making a list of your child's major fears and worries. Try to rank order them from mild to severe. To encourage success, I'd start with a mild-to-moderate fear before taking on his extreme reaction to loud noises.

Key components of a cognitive behavioral approach include introducing coping strategies such as deep breathing and "helpful thoughts" that can help a person manage fearful reactions.

For example, you can teach your son to take deep slow breaths to help manage his body's physical anxiety reactions.

"Helpful thoughts" are statements that your son can say to himself when faced with a situation that makes him anxious. For example, you can coach to your son to say, "This is a loud noise. I don't like it, but I can handle it."

To help your son to learn these strategies, I suggest you model taking deep breaths while repeating a "helpful thought" out loud.

#### Graded exposure

The most important step is to help your son face his fears a little at a time. We call this "graded exposure." For example, explain to your son that the two of you are going to listen to a recording of thunder. The first time, you might play the recording at a soft volume, then gradually increase the volume over time as he demonstrates increased comfort with the sounds.

Or you might try watching a video of a balloon pop – perhaps with the volume off the first time. Then he can watch a real balloon pop while standing some distance away. Over time, he can move closer and closer to the balloon.

After such exercises, you can present him with small rewards for being brave and "facing fears." Remember that even a small act of bravery – such as listening to a recording of thunder for 10 seconds – represents an important step toward handling fears. It deserves to be acknowledged.

Although graded exposure may seem counterintuitive, research indicates that this strategy is the single most effective strategy for getting over a particular fear.

I wish you and your son the very best. Please let us know how you're doing with an email to [GotQuestions@autismspeaks.org](mailto:GotQuestions@autismspeaks.org).

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## Additional Resources & Tools

#### EXPERT OPINION

[Help for Child with Autism & Recurring Behavioral Crises: Part 2](#)

#### EXPERT OPINION

[Parents Seek Help for Son with Autism and Recurring Behavioral Crises](#)




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#### EXPERT OPINION


[Parents Seek Help: Child with Severe Autism Eats Only Sweets](#)





I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE   
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EMAIL foreverfamily33@adl.com

SIGNATURE   
PRINTED NAME FRANCES E Lillard  
ADDRESS 478 Mainville Dr. LG  
EMAIL

SIGNATURE   
PRINTED NAME C. Huxoll  
ADDRESS 472 Modelaire DR. La Grande, OR 97850  
EMAIL CHRISHUXOLL@EMAIL.COM

I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE

PRINTED NAME

Jessie Huxoll

ADDRESS

472 Madeline Dr. La Grande, OR 97050

EMAIL

JESSIEHuxoll@LIVE.COM

SIGNATURE

PRINTED NAME

Brent H Smith

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smithbrent@gmail.com

SIGNATURE

PRINTED NAME

M. Jeannette Smith

ADDRESS

410 Allium Street

EMAIL

jeannettesmith@gmail.com

SIGNATURE

PRINTED NAME

Kimberley Hetstuman

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2409 CENTURY LP, LA GRANDE, OR 97850

EMAIL

kimheitstuman@hotmail.com

SIGNATURE

PRINTED NAME

Shawn K. Mangum

ADDRESS

2909 E. M. Ave.

EMAIL

Hoya/hw95@me.com



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SIGNATURE

*Jonathan D. White*

PRINTED NAME

Jonathan D. White

ADDRESS

485 Madelaine Dr

EMAIL

jondwhite418@gmail.com

SIGNATURE

*Robin Stedfeld*

PRINTED NAME

Robin Stedfeld

ADDRESS

485 Madelaine Dr. LaGrande

EMAIL

rstedfeld@yahoo.com

SIGNATURE

*Ronnie L. Allen*

PRINTED NAME

Ronnie L. Allen 541-963-7720

ADDRESS

410 Balsa Street LA GRANDE, OREGON 97850

EMAIL

N/A NONE:

SIGNATURE

*Rita Allen*

PRINTED NAME

Rita Allen

ADDRESS

410 Balsa St. LaGrande Or.

EMAIL

SIGNATURE

*Linda M. Snyder*

PRINTED NAME

Linda M. Snyder

ADDRESS

491 17704241R

EMAIL

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SIGNATURE *Robin J. Ostermann*

PRINTED NAME Robin J. Ostermann

ADDRESS 495 Modelaire Dr La Grande, OR 97850

EMAIL

SIGNATURE *Robert J. Ostermann*  
Robert J. Ostermann

PRINTED NAME

ADDRESS 495 Modelaire Dr. La Grande, OR 97850

EMAIL

SIGNATURE *John Yeates*

PRINTED NAME JOHN YEATES

ADDRESS 408 SUNSET DRIVE LA GRANDE, OR 97850

EMAIL jyeates52@gmail.com

SIGNATURE *Ruth Schumacher Yeates*

PRINTED NAME Ruth Schumacher Yeates

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EMAIL ruthschumacheryeates@gmail.com

SIGNATURE *D. Dale Mammen*

PRINTED NAME D. Dale Mammen

ADDRESS 405 Balsa. La Grande, Or

EMAIL dmammen@comi.com



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SIGNATURE

PRINTED NAME

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SIGNATURE *Damon Sexton*  
PRINTED NAME *Damon Sexton*  
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SIGNATURE *Coy Sexton*  
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SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

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ADDRESS  
EMAIL



I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE *Lois Barry*  
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SIGNATURE *Cathy Webb*  
PRINTED NAME CATHY WEBB  
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SIGNATURE *JoAnn Marlette*  
PRINTED NAME JOANN MARLETTE  
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SIGNATURE *Keith D. Hudson*  
PRINTED NAME Keith D. Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL Keithdhudson@gmail.com

SIGNATURE *Laura Elly Hudson*  
PRINTED NAME Laura Elly Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
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I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE *Lynn Wheeler Duncan*  
PRINTED NAME LYNN WHEELER DUNCAN  
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SIGNATURE *Gary D. Pierson*  
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SIGNATURE *Anna G. Carinato*  
PRINTED NAME Anna G. Carinato  
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SIGNATURE *Joe Horst*  
PRINTED NAME JOE HORST  
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EMAIL joehorst@con.com

SIGNATURE *Angela Sherer*  
PRINTED NAME Angela Sherer  
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I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE

*Merle E Comfort*

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MERLE E COMFORT

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merlecomfort@gmail.com

SIGNATURE

*Robin L. Maille*

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Robin Maille

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*Carol S. Summers*

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CAROL S. SUMMERS

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SIGNATURE

*Caroline Kaye Juniper*

PRINTED NAME

Caroline Kaye Juniper

ADDRESS

406 4th Street - LaGrande - OR 97850

EMAIL

SIGNATURE

*Gerald D. Juniper*

PRINTED NAME

Gerald Darwin Juniper

ADDRESS

406 4th St. LaGrande, OR. 97850

EMAIL

I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
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EMAIL asherer@frontier.com.

SIGNATURE *Heather M. Null*  
PRINTED NAME Heather M. Null  
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EMAIL hnull@conl.com

SIGNATURE *Bert R. Freewing*  
PRINTED NAME Bert R. Freewing  
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EMAIL jeantfreewing@gmail.com

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL





# Oregon Department of Energy and the Energy Facility Siting Council

Public Hearing on the Draft Proposed Order  
for the Boardman to Hemingway Transmission Line  
June 18-20 and June 26-27, 2019, 4:30-8 p.m.  
Public Written or Oral Testimony Registration

Name (mandatory) Laurie Schiss

Mailing Address (mandatory) PO Box 1110

42877 Sunnyslope Road Baker Co

Phone Number (optional) ( ) Email Address (optional) OR 97811

Today's Date: June 19 2019 laurie@thegeo.net

Do you wish to make oral public testimony at this Hearing: Yes X No not first! have  
photos

Written comments can also be submitted today.

All written comments must be received by the deadline, July 23, 2019, 5 p.m. PDT to:

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, OR 97301  
Fax: 503-378-6457  
Email: [B2H.DPOComments@oregon.gov](mailto:B2H.DPOComments@oregon.gov)

Note: by submitting written or oral testimony, you will receive a notice from the Oregon Department of Energy at a future date of the opportunity to request party status in a contested case hearing on the proposed facility.

## Written Testimony

(Please print legibly - Use the back for additional space if needed. Additional written comments may be attached to this card.)

I live below the Interpretive  
Center We have Oregon Trail on  
our property. We already bear the  
burden of the 230V Line.

Page 46	Page 48
<p>1 HEARING OFFICER WEBSTER: Thank you.</p> <p>2 After Mr. Meyer, we will hear from Laurie, is</p> <p>3 it Solisz?</p> <p>4 MR. MIKE MEYER: My name is Mike Meyer. I</p> <p>5 live in Baker City. This will be one of them less</p> <p>6 effective comments.</p> <p>7 HEARING OFFICER WEBSTER: Mr. Meyer, I think</p> <p>8 just for the record we do need an address more specific</p> <p>9 than just Baker City.</p> <p>10 MR. MIKE MEYER: And why do you need my</p> <p>11 address?</p> <p>12 HEARING OFFICER WEBSTER: So that we can</p> <p>13 provide you notice of the things that are happening.</p> <p>14 MR. MIKE MEYER: Do I -- mailing address?</p> <p>15 HEARING OFFICER WEBSTER: Mailing address.</p> <p>16 MR. MIKE MEYER: Mailing address?</p> <p>17 HEARING OFFICER WEBSTER: Yes.</p> <p>18 MR. MIKE MEYER: Is 3155 Grove Street, Baker</p> <p>19 City, Oregon.</p> <p>20 HEARING OFFICER WEBSTER: Thank you.</p> <p>21 MR. MIKE MEYER: I find it unfathomable that</p> <p>22 anyone from Idaho, including Idaho Power, has the</p> <p>23 audacity to rape 71 miles of Baker County with what I</p> <p>24 think will be unnecessary and outdated towers by the</p> <p>25 time they're ever put in. And I also would like to</p>	<p>1 on with the Interpretive Center, which is a beautiful</p> <p>2 museum -- and if you people are not from here, I would</p> <p>3 highly recommend you going there. It is so inspiring.</p> <p>4 I cry every time I go. This bump is the Interpretive</p> <p>5 Center. So this is looking east. The Interpretive</p> <p>6 Center looks west, which is the towers are going to come</p> <p>7 up, supposedly not be able to be seen, under the</p> <p>8 Interpretive Center.</p> <p>9 So we have about 300 acres. We already bear,</p> <p>10 our particular property already bears the burden of the</p> <p>11 high-voltage 230 line. That was placed in 1950. That</p> <p>12 line, they gave my ancestors, who thought it was a good</p> <p>13 idea to help get electricity, a little bit of money.</p> <p>14 However, 60 years later, we still have the line on our</p> <p>15 property. It impacts our ability to do crops, it</p> <p>16 interrupts our grazing. They were sagging close to the</p> <p>17 ground. My husband was in jeopardy on his tractor this</p> <p>18 last year. There's not much maintenance that goes on</p> <p>19 with these lines.</p> <p>20 So the B2H, and you've already heard about the</p> <p>21 right-of-way difficulties that are going to be expected.</p> <p>22 We've already had impact from the B2H; people, they've</p> <p>23 entered our land without permission, claimed ignorance,</p> <p>24 they drive on our property, they've flown over with</p> <p>25 helicopters, interrupted the cattle. So we've already</p>
Page 47	Page 49
<p>1 shame anyone that would ever permit this to happen.</p> <p>2 Thank you.</p> <p>3 HEARING OFFICER WEBSTER: Thank you.</p> <p>4 Following Ms. Solisz, we'll hear from Gail, is</p> <p>5 it Carbiener?</p> <p>6 MR. GAIL CARBIENER: Close.</p> <p>7 HEARING OFFICER WEBSTER: Sorry for maiming</p> <p>8 names.</p> <p>9 MS. LAURIE SOLISZ: My name is Laurie Solisz.</p> <p>10 I'm a direct descendent of the land that this is going</p> <p>11 to go across. My mailing address is P.O. Box 1110,</p> <p>12 Baker County, Oregon.</p> <p>13 So what I have brought today, I'm not very</p> <p>14 high tech, but I have provided some pictures of how this</p> <p>15 will impact our property, which is directly below the</p> <p>16 Interpretive Center. I have four pictures here, and the</p> <p>17 shadow, which is so interesting how this works, this is</p> <p>18 what happens in the morning, sunrise, the shadow falls</p> <p>19 directly on the line where the transmission line is</p> <p>20 proposed, which I find very fascinating.</p> <p>21 We don't have -- we just -- and this is a</p> <p>22 picture of how the line will go across these hills. And</p> <p>23 I will leave these pictures with you. The little bump</p> <p>24 on the hill is the Interpretive Center. So if anyone</p> <p>25 thinks that this isn't going to interrupt what's going</p>	<p>1 experienced disturbance. And everyone claims ignorance,</p> <p>2 Oh, we didn't mean to do that. Well, we didn't think,</p> <p>3 and so forth. But it happens, and we are the ones that</p> <p>4 bear that burden.</p> <p>5 Well, I guess I ran through all my thoughts.</p> <p>6 Any questions?</p> <p>7 HEARING OFFICER WEBSTER: Do you want to leave</p> <p>8 the photos?</p> <p>9 MS. LAURIE SOLISZ: I would.</p> <p>10 And if you have any questions, you can always</p> <p>11 ask.</p> <p>12 HEARING OFFICER WEBSTER: Any questions,</p> <p>13 Council? Thank you.</p> <p>14 MS. LAURIE SOLISZ: Thank you for listening.</p> <p>15 Thanks for coming.</p> <p>16 HEARING OFFICER WEBSTER: We will next, after</p> <p>17 we hear from you, we will hear from Wayne -- is it</p> <p>18 Kaaen?</p> <p>19 MR. WAYNE KAAEN: You're doing good on the</p> <p>20 names.</p> <p>21 HEARING OFFICER WEBSTER: Thank you.</p> <p>22 MR. GAIL CARBIENER: My name is Gail</p> <p>23 Carbiener. I live in Bend, Oregon, on 2920 Northeast</p> <p>24 Connors Avenue. I represent the Oregon-California</p> <p>25 Trails Association. I have been before the Council</p>



Oregon Energy Facility Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E  
Salem, OR 97301

Email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project (B2H) 9/28/2018; Draft Proposed Order 5/23/2019.

Dear Chair Beyeler and Members of the Council:

This letter is a public comment for the above referenced project. Specifically, this letter will discuss Idaho Power's compliance with Standard 345-022-0110 - Public Services, in Exhibit U (3.5.6.2 and 3.5.6.5) of the EFSC application for B2H to ODOE. The letter will discuss the impact potential wildfires caused by the B2H transmission line will have on the ability of public and private providers within the analysis area to provide fire protection.

The effect of transmission lines on wildfire impact in western states has been well documented. In California, PG&E lines have caused 5 of the 10 most destructive fires since 2015, producing a liability of over 30 billion for PG&E. When considering the impact of B2H's operation, residents of Union County find the similarities between La Grande and Paradise California, where the infamous Camp Fire struck in 2018, deeply concerning. La Grande and Paradise share similar elevations and populations, however, La Grande has several characteristics that make it significantly more vulnerable to the ravages of wildfire than Paradise. For instance, La Grande averages 18 inches of rain yearly while Paradise enjoys 55 inches. Additionally, the proposed line runs adjacent to La Grande, while the line causing the Camp Fire was 7 miles from Paradise. *Oregon's 2006 Communities at Risk Assessment* by the Oregon Department of Forestry cites a startling fact: **The fire risk of the wildland urban interface (WUI) in La Grande has been rated the #1 WUI fire risk in Oregon!**

There is no doubt that construction of the proposed B2H transmission line would significantly increase the risk of wildfire in our area. From Idaho Power's own Draft Protection Order (Exhibit U-3.5.6.2, p. U-24): "Most activities will occur during summer when the weather is hot and dry. Much of the proposed construction will occur in grassland and shrub-dominated landscapes where the potential for naturally occurring fire is high. Project construction-related activities, including the use of vehicles, chainsaws, and other motorized equipment, will likely increase this potential risk in some areas within the Site Boundary. Fire hazards can also be related to workers smoking, refueling, and operating vehicles and other equipment off roadways. Welding on broken construction equipment could also potentially result in the combustion of native materials near the welding site." Idaho Power recognizes this hazard but makes no consideration of it in its application.

There are several specifics to examine in an analysis of the proposed B2H line's effects on Union County's ability to provide fire protection services. Firstly, firefighting crews in our region are

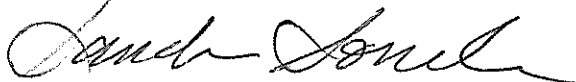
limited and volunteer. In their application, Idaho Power avers, "Most of the fire districts within the analysis area comprise volunteers, and in some cases, it takes considerable time to collect and mobilize an entire fire crew." As well, JB Brock, Union County emergency Manager states in Idaho Power's application "volunteer fire departments (rural fire protection districts) have a hard time finding volunteers due to budget constraints, similarly to budget constraints at the state and federal level. The wildland fires are getting bigger and cost more to fight" (U-1C-6). Fire crews in Union County are not equipped to handle potential wildfires generated by the proposed B2H transmission line.

The fact that fire crews are unstable, small and volunteer affects many aspects of their ability to respond to wildfires. Delayed response times, as noted in the quote from the previous paragraph, is one effect. Estimates of response time in the EFSC application are best-case scenarios. The estimate of 4 to 8 minutes as the response time in Union County (Table U-10) is far from even a best-case scenario (p. U-17). Residents that live on Morgan Lake Road concur that driving time is at least 10-15 minutes to the most accessible areas of the line from the base of Morgan Lake Road. Add to this estimate travel time from the La Grande Fire Station (approximately 7 minutes) and the time needed for individual fire fighters to travel to the Fire Station for a more realistic best-case scenario response time. The Paradise Camp Fire burned at a rate of over 1 acre per second!

Another factor in transmission line fires particularly impactful for small volunteer fire departments is the complications to firefighting introduced by the transmission lines themselves. According to Marvin Vetter, ODOF's Rangeland Coordinator, "local crews have no training in this scenario and will wait for the lines to be de-energized." JB Brock, Union County Emergency Manager, states, "The project (transmission line) could limit the ability on initial attack if fire fighters have to wait for power lines to be de-energized." (U-1C-6) These delays allow fires to grow even more.

How can communities struggling to maintain volunteer fire crews hope to address the overwhelming additional challenges and risks imposed by a project such as the B2H transmission line? Where is this addressed in Idaho Power's application and how can Idaho Power conclude that the proposed B2H transmission line is "not expected to have significant adverse impacts on fire protections services" (Exhibit U 3.5.6.2)? Considering the current capacities of fire protection services in Union County and the additional risks of wildfire imposed by the B2H transmission line, I urge you to act in accordance with state statute OAR 345-022-0110 and reject Idaho Power's application to construct the Boardman to Hemingway transmission line.

Sincerely,



Name *Sandra Sorrels*  
Address *402 Main Ave*



**ESTERSON Sarah \* ODOE**

---

**From:** ssovern@hotmail.com  
**Sent:** Wednesday, August 21, 2019 2:13 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** B2H comments  
**Attachments:** B2HSovern.pdf

Please see attached.

Thanks

Stan

August 21, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St, N.E.  
Salem, OR 97301

Sent Via email: B2H.DPOComments@Oregon.gov

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

RE: Endangered Fish in Ladd Creek and Tributaries, Union County

Dear Chair Beyeler and Members of the Energy Facility Siting Council:

I am writing in regards to the proposed Boardman to Hemingway Transmission Line Project (B2H). This letter outlines a deficiency in Idaho Power's application documents concerning anadromous fish passage. I request that my letter be entered into the permanent written record. I also request response to, and resolution of, the issues I raise herein.

Both of the proposed routes in Union County for the Boardman to Hemingway Transmission Line project include a crossing of the Ladd Creek and/or its tributaries. Ladd Creek flows approximately 14 miles through the Wallowa Whitman National Forest and private land on the east side of the Blue Mountains, into the Ladd Marsh Wildlife area, connecting with Catherine Creek and the Grande Ronde, Snake, and Columbia Rivers.

Historically, there were anadromous fish (steelhead and salmon returning from the ocean) in Ladd Creek. ODFW has documented that steelhead and salmon used Ladd Creek for spawning. However, construction of Interstate 84 in the 1970's stopped the passage of these fish above the interstate due to a vertical culvert being installed (see attached Power Point "Ladd Creek Fish Passage Project - ODOT FTP").

The Oregon Department of Fish and Wildlife's mission is to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. The department is the only state agency charged exclusively with protecting Oregon's fish and wildlife resources. The state Wildlife Policy (ORS 496.012) and Food Fish Management Policy (ORS 506.109) are the primary statutes that govern management of fish and wildlife resources.

The B2H Draft Proposed Order (pages 9-10 of *draft Fish Passage Plan in ASC Exhibit BB, Attachment BB-2*), states that Ladd Creek and its tributaries contain only local fish (trout), but that status has changed due to major culvert work along and under the I-84



interstate in the last 4 years. As a result, the information contained in the B2H Draft Proposed Order is incorrect and out of compliance with Oregon and Federal statutes.

In 2015, ODOT completed a 2-year project to replace culverts that previously had blocked fish passage in the creek and at the I-84 crossing of Ladd Creek (see <https://www.lagrandeobserver.com/csp/mediapool/sites/LaGrandeObserver/LocalState/story.csp?cid=4108250&sid=824&fid=151>).

According to ODFW Fish biologist Tim Bailey, in the year after completion of the fish passage project (2016) a steelhead redd was documented above the culvert, upstream from the freeway.

ODOT has continued this fish passage project in 2019 along with plans for freeway reconstruction and additional traffic lanes (see <https://www.constructionequipmentguide.com/odot-works-to-improve-i-84-fish-passage-in-ladd-canyon/45648>). Construction projects have resulted in costs above 32 million dollars, and the list of agencies and individuals in support of this costly fish passage project include ODFW, Union County Board of Commissioners, The Grande Ronde Model Watershed, the US Army Corps of Engineers, Senator Jeff Merkley, Senator Ron Wyden, and the National Marine Fisheries Service (see <https://www.oregon.gov/odot/projects/pages/project-details.aspx?project=20381>) and attached ([PPT] Ladd Creek Fish Passage Project - ODOT FTP).

An entire watershed is protected when it is determined that it contains federally threatened or endangered fish species. Idaho Power in its application and the B2H Draft Proposed Order have failed to incorporate information regarding identification of the habitat category or locations which will be impacted by the proposed B2H powerline development. Critical habitat is specifically identified in the federal law recording the listing of threatened species. The current application and site certificate fails to include requirements that would assure that the state is complying with federal laws in providing habitat protection for listed species (salmon and steelhead).

Idaho Power has two proposed line routes across and through Ladd Canyon, a preferred and an alternative. Idaho power has also stated that because there are only resident fish in Ladd Creek, that "No new fish passage plan anticipated" (page 9-11 of *draft Fish Passage Plan in ASC Exhibit BB, Attachment BB-2*).

Because the alternative route through Ladd Canyon would necessitate a 3a/3b design change for a bridge crossing on Ladd Creek and there are threatened anadromous fish in Ladd Creek, an ODFW fish passage plan will need to be implemented (OAR 17 412-0035) based on (OAR) 635-412-0020 for this route for Ladd Creek and its tributaries.

In conclusion, the B2H DPO contains improper evaluation of the potential long term negative impacts on fish habitat in the Ladd Creek drainage, including tributaries. The Endangered Species Act requires identification and evaluation of effects of the proposed action through ESA section 7(a)(2) consultation with NMFS (anadromous fish

species). Federally protected anadromous species are currently present in Ladd Creek, and its tributaries.

Idaho Power's B2H DPO is not in compliance with State or Federal Protected Species laws. The applicant has failed to meet the requirements for issuance of a Site Certificate contained in OAR-345-022-0080. Therefore, issuance of a Site Certificate should be denied.

Sincerely,

A handwritten signature in black ink, appearing to read "Stan G. Sovern", with a long horizontal flourish extending to the right.

Stan G. Sovern  
404 Walnut Street  
La Grande, OR 97850  
509-899-4494  
ssovern@hotmail.com



August 2, 2019

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301  
email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

**THE APPLICANT SIGNIFICANTLY UNDERSTATES THE IMPACTS TO EMPLOYMENT AND FOREST LANDS AS A RESULT OF THE PROPOSED B2H TRANSMISSION LINE**

Exhibit K, Attachment K-2, Pages 19 and 20, Section 7.0

The applicant claims that removal of forestland by clearing of trees for a period of over 50 years will have little economic impact to forest sector jobs in Umatilla and Union County. They value the loss of 245.6 acres of forestland in Umatilla County at \$488.60 per acre. However, they value the removal of 530.1 acres lost to the transmission line in Union County at \$182.98 per acre. The applicant provides no justification or documentation to support the difference in value per acre between Umatilla and Union Counties.

Some forest facts related to this section:

According to US Forest Service Tech. Rept. PNW-GTR-578 Rev. 2004 entitled "Forests of Eastern Oregon: an Overview", Eastern Oregon Forests produce an average of 20 cubic feet per acre of timber each year. That would mean that an acre of land would produce approximately 240 board feet of lumber per year per acre during the life of the transmission line. According to Scott Hartell, Planning Director, Union County, forest land in Union County is classified as either 20 cubic feet per acre per year, or 50 cubic feet per acre per year, so the value amounts could be significantly higher. The "Forest Facts Oregon's Forests: Some Facts and Figures" published in 2009 by the Oregon Department of Forestry states that economists estimate that for every billion board feet that is harvested in Oregon 11 forest sector jobs are created or retained.

Idaho Power's stated timber values are unrealistically low according to individuals owning forest land in both counties. No one would be using land for trees which precludes other uses if the economic benefits were as the developer is stating.

The applicant's identification of the acres of forest land impacted is incorrect due not only to the failure to use soil types to identify forest lands, but also, the fact that they are requesting a 300 foot right of way and they need to include the value of any additional trees they will be removing in the 100 foot area on each side of the right of way.

The applicant claims that the value of the land in the right of way will not be significantly reduced due to the owner's opportunity to use the land for agricultural or range land after the transmission line is constructed. This is completely unfounded. The lineal nature of a transmission line precludes any productive use of land taken for the transmission line. The right of way is too narrow to make it available for production of crops, and the costs associated with purchasing equipment for agricultural operations would be prohibitive.

It would be unusual for a forest operator to already own equipment for a crop operation. In order to use the right of way as grazing land, it would have to be fenced. According to "Estimated Livestock Fencing Costs for the Small-Farm Owner" by Derek L. Barber, the average cost of materials for ¼ mile (1,320 ft.)

of field fence is \$1,108.53 plus the cost of building it. The Iowa State University Extension identified 2011 costs for constructing ¼ mile of fencing to be \$1,947.75 installed. Enclosing a square acre requires 820 feet of fence. In other words, the cost of fencing an acre of lost forest land would exceed the value the applicant claims the land would add to the local economy per acre for the 50 years the transmission line is predicted to be in place.

The applicant also claims that the transmission line right of way through forest lands will not cause a substantial change in accepted forest practices or cause a significant increase in the cost of accepted forest practices on lands to be directly impacted by the Project or on surrounding lands. Removing trees from land currently being used to grow them certainly will create a substantial change in accepted forest practices. It also will substantially increase the costs of growing and harvesting trees on the surrounding lands. Soil compacted by heavy equipment used to access the line will discourage regrowth.

The transmission line will make it impossible to use aerial equipment to harvest trees on steep hillsides adjacent to the line; it will increase costs of harvest due to the need to avoid equipment contact with the transmission lines, avoid trees falling on the transmission lines, require new access and egress from the forested lands that avoid having log trucks and equipment moving below the transmission line, It will decrease the harvest along the transmission line due to tree loss along the corridor from wind and weather conditions impacting weakened root infrastructure once the transmission corridor is cleared.

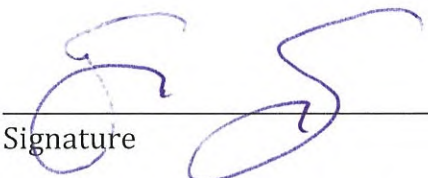
Removing forested land along the transmission line will result in nearly a total loss of the economic value of the land removed from production of trees, and will impact the landowners and county economy not only by the loss of the production of trees and taxes, fees, employment and other benefits coming from that activity, but there will be related losses to the productivity of adjacent land, increased costs of harvesting along the transmission line, introduction of noxious weeds, increased risk of wildfire, potential increase in the number of trespassers, interference with wildlife activities including displacement of wildlife to what may be less desirable habitat, opening the area up to increased predation on the multiple non-raptor species utilizing the forested areas, decreased value of land if it is sold, long-term reduction in assessed value of the land, etc. The conclusions stated by the applicant in section 8.0 are false, absolutely without merit.

In addition, the applicant has failed to provide documentation to support their conclusions. The only reference the applicant cites that relates at all to this issue is the publication from the Oregon Forest Resources Institute.

In summary:

The applicant has failed to document that they will comply with Land Use Goal 4 OAR 660-006-000 through OAR 660-006-0010; There is no documentation provided that would indicate they are in compliance with OAR 345-022-0030 and they have not documented, nor are they able to meet the requirement contained in OAR 345-022-0030(4) to allow an exception.

Therefore, the Council should DENY the application for site certificate.

 \_\_\_\_\_  
Signature Printed Name Eleanor Spangler

Mailing Address: 803 Main Ave.  
LaGrande OR 97850





# Oregon Department of Energy and the Energy Facility Siting Council

Public Hearing on the Draft Proposed Order  
for the Boardman to Hemingway Transmission Line  
June 18-20 and June 26-27, 2019, 4:30-8 p.m.  
Public Written or Oral Testimony Registration

Name (mandatory) Ellie Spangler

Mailing Address (mandatory) 803 Main Avenue  
La Grande, OR 97850

Phone Number (optional) ( ) \_\_\_\_\_ Email Address (optional) \_\_\_\_\_

Today's Date: 6-20-2019

Do you wish to make oral public testimony at this Hearing: Yes \_\_\_\_\_ No X

Written comments can also be submitted today.

All written comments must be received by the deadline, July 23, 2019, 5 p.m. PDT to:

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, OR 97301  
Fax: 503-378-6457  
Email: [B2H.DPOComments@oregon.gov](mailto:B2H.DPOComments@oregon.gov)

Note: by submitting written or oral testimony, you will receive a notice from the Oregon Department of Energy at a future date of the opportunity to request party status in a contested case hearing on the proposed facility.

## Written Testimony

(Please print legibly – Use the back for additional space if needed. Additional written comments may be attached to this card.)

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August 10, 2019

Energy Facilities Siting Council

c/o Kellen Tardaewether, Siting Senior Analyst

Oregon Department of Energy

550 Capitol St. N.E.

Salem, OR 97301

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

Re: Soil Protection - **Drill site 112/4; 113/1 and its vicinity on unstable and steep slopes**

My comment addresses the known hazards and adverse effects of construction of the B2H transmission line on unstable ground.

The applicable standard is: OAR 345-022-0022. (c) *...The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soil hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility...*

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035.*

**Drill sites 112/4; 113/1** are shown on the following tables and maps and analysis by Shannon & Wilson, Inc.:

Soils; Map page 21 of 44:

Table B3: Soil Descriptions, described as:

56E 56F, erosion hazard; severe; percent of slope Low; 35: High; 70. (sheet 2 of 4)

Table C1: Summary of Proposed Borings; Map Sheet 42

112/4 –Slope Stability/Landslide; Geo-Seismic Hazard.

113/1 – Slope Stability/Landslide; Geo-Seismic Hazard.



## E.2.11 SLIDO 115

SLIDO-3.4 FernML2010\_115 Northing: 5010654 Easting: 418706 Sheet 13

SLIDO 115 is referenced at a scale of 1:100,000 (Ferns et al., 2010), and its mapped extents intersect the IPC Proposed Route between towers 112/5 and 113/1. The feature is mapped as an alluvial fan, not a landslide; and the material appears to be contained within a drainage spanned by the two towers. The feature is unlikely to affect the proposed towers or the associated work areas. A field reconnaissance of this area should be performed as part of the geotechnical exploration program.

Idaho Power Corporation, in Exhibit H 2.2.4 states *"The soils (in Union County) vary from a few inches to a few feet thick over weathered bedrock, are generally well-drained, and are typically characterized as having a severe erosion hazard."*

Idaho Power Corporation admits in ASC page B-12 that *"The mountainous area such as the Blue Mountains present very challenging topography with many areas of steep slopes in excess of 35 percent and other areas of unstable slopes presenting design and construction challenges."*

IPCs stated original intention to the EFSC was the following: *"Using topographic maps the corridors were adjusted to avoid or minimize distance across very steep slopes and other physical features less desirable for construction and operation of a transmission line."*


**Hazard Analysis** Union County Emergency Operations Plan Updated 6/30/16 lists Winter weather as the highest weighted risk item before Seismic, Fire, Hazmat-Transportation, and Drought. Most of the area receives a large percentage of the annual moisture as snowfall and both the Winter storms and the Spring melt can be precipitous and unpredictable.

The area surrounding **Drill sites 112/4; 113/1** adds a hazard of unknown proportions to a populated area with a delicate earth crust. **The steep and unstable slopes will require many intrusive modifications to meet the standard of safety and could very easily "aggravate" the stability of the slopes. The application does not comply with the relevant standard.**

### Conclusion and Requested Relief:

**Drill site Drill sites 112/4; 113/1, and its vicinity**, represent a significant risk of several possible adverse effects. This area characterized by steep slopes and hazardous snow melts should be removed for consideration as a site for a transmission "facility". Idaho Power Corporation in *Exhibit H 3.9 Mitigation* describes methods, trucks, and towers designed to mitigate problems of unstable soil with structure and footing modifications, this should not be considered an acceptable risk when the entire area is unstable.

I appreciate your consideration and your attention to this matter.

Name: *Katherine Spangler* 

Address: *1503 Monroe Ave, LG OR 97850*

August 10, 2019

Energy Facilities Siting Council

c/o Kellen Tardaewether, Siting Senior Analyst

Oregon Department of Energy

550 Capitol St. N.E.

Salem, OR 97301

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

Re: Soil Protection - **Drill site 110/2; 110/3 and its vicinity on unstable and steep slopes**

My comment addresses the known hazards and adverse effects of construction of the B2H transmission line on unstable ground.

The applicable standard is: OAR 345-022-0022. (c) *...The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soil hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility...*

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035.*

**Drill sites 110/2; 110/3** are shown on the following tables and maps and analysis by Shannon & Wilson, Inc.:

Soils; Map page 21 of 44:

Table B3: Soil Descriptions, described as:

56E 56F, erosion hazard; severe; percent of slope Low; 35: High; 70. (sheet 2 of 4)

Table C1: Summary of Proposed Borings; Map Sheet 39 & 40

110/2 – - Angle change along alignment Slope Stability/Landslide; Geo-Seismic Hazard; Fault crossing.

110/3 – Slope Stability/Landslide; Geo-Seismic Hazard.



## E.2.10 SLIDO 225

SLIDO-3.4 Fern ML2010\_225 Northing 5010654 Easting 419492 Sheets 13,14

SLIDO 225 is mapped as a landslide referenced at a scale of 1:100,000 (Ferns et al., 2010). It intersects the IPC Proposed Route between 110/2 and 112/2. And may affect stability at towers 110/1 through 112/1 along with associated work areas. A field reconnaissance of this area should be performed as part of the geotechnical exploration program.

Idaho Power Corporation, in Exhibit H 2.2.4 states *"The soils (in Union County) vary from a few inches to a few feet thick over weathered bedrock, are generally well-drained, and are typically characterized as having a severe erosion hazard."*

Idaho Power Corporation admits in ASC page B-12 that *"The mountainous area such as the Blue Mountains present very challenging topography with many areas of steep slopes in excess of 35 percent and other areas of unstable slopes presenting design and construction challenges."*

IPCs stated original intention to the EFSC was the following: *"Using topographic maps the corridors were adjusted to avoid or minimize distance across very steep slopes and other physical features less desirable for construction and operation of a transmission line."*

**Hazard Analysis** Union County Emergency Operations Plan Updated 6/30/16 lists Winter weather as the highest weighted risk item before Seismic, Fire, Hazmat-Transportation, and Drought. Most of the area receives a large percentage of the annual moisture as snowfall and both the Winter storms and the Spring melt can be precipitous and unpredictable.

The area surrounding **Drill sites 110/2; 110/3** adds a hazard of unknown proportions to a populated area with a delicate earth crust. **The steep and unstable slopes will require many intrusive modifications to meet the standard of safety and could very easily "aggravate" the stability of the slopes. The application does not comply with the relevant standard.**

### Conclusion and Requested Relief:

**Drill site Drill sites 110/2; 110/3, and its vicinity**, represent a significant risk of several possible adverse effects. This area characterized by steep slopes and hazardous snow melts should be removed for consideration as a site for a transmission "facility". Idaho Power Corporation in *Exhibit H 3.9 Mitigation* describes methods, trucks, and towers designed to mitigate problems of unstable soil with structure and footing modifications, this should not be considered an acceptable risk when the entire area is unstable.

I appreciate your consideration and your attention to this matter.

Name:

Remy Spangler

Address:

1201 8th St Apt B La Grande OR

## References:

Burns, W. J., Mickelson, K. A., Saint-Pierre, E. C., 2011 SLIDO-2, Statewide Landslide Information Database for Oregon, Release 2; Oregon Department of Geology and Mineral Industries.

Ferns, Mark L. McConnell, V. S., Madin, I.P., and Johnson, J.A., 2010 Geology of the Upper Grande Ronde Basin, Union County, Oregon: Oregon Department of Geology and Mineral Industries Open-File Report 2003-11, 85.0, scale 1:125,000.

Idaho Power Corporation, 2017, *Exhibit H of the Application for the Boardman to Hemingway Transmission Line Project*: Report Prepared by Idaho Power Corporation, Boise, Idaho.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway*, Idaho January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, lake Oswego, Oregon. 97035.

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

Oregon Department of Energy; Energy Facility Siting Council – Chapter 345, Division 22 General Standards for Siting Facilities; OAR Amend: 345-022-0022; *Soil Protection* Effective date: 10/18/2017.

Idaho Power Corporation, 2017, *Exhibit H of the Application for the Boardman to Hemingway Transmission Line Project*: Report Prepared by Idaho Power Corporation, Boise, Idaho.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway*, Idaho January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, lake Oswego, Oregon. 97035, page 28 and elsewhere.

Union County, Oregon, Union County Emergency Operations Plan – Hazard Analysis. Updated – 6/30/2016.



August 14, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street N.E.  
Salem, OR. 97301

Via E-MAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project  
9/28/2018; Draft Proposed Order 5/23/2019

To: Chairmen Beyeler and Members of the Council

I appreciate the opportunity to comment on the B2H Draft Proposed Order. The Oregon National Historic Trail will be significantly affected by the B2H Transmission Line.

The Draft Proposed Order identifies significant impacts to the Oregon Trail in several Exhibits, including Exhibit C: Property Location and Maps; Exhibit L: Protected Areas; Exhibit R: Scenic Aesthetic Values; Exhibit S: Cultural Resources; Exhibit T: Recreational Facilities; and Exhibit X: Noise.

B2H crosses the Oregon Trail at least 8 times. EFSC has done a reasonable job of protecting the Trail during construction and operation, if the proposed requirements are followed, **except at the Oregon Trail Interpretive Center at Flagstaff Hill.**

The B2H Transmission Line should be buried for approximately 2 to 2 ½ miles to comply with the exhibits indicated above. Idaho Power has from the early years refused to do any significant analysis for this option. IPC uses cost as the reason for stating that undergrounding is not feasible. Cost is not a specific standard, and costs are the responsibility of the Oregon Public Utilities Commission during rate considerations. EFSC has determined that IPC has the Financial ability even if some partners choose to not participate, so reasonable cost should not be a determining factor for EFSC.

**EFSC should refuse to approve the Draft Project Order for the following reasons:**

1. Does not comply with Noise Standards as no measurements were done at the Oregon Trail viewpoint or walking trails endpoint near milepost 146. Perhaps not a "Noise Sensitive Property," in the context of residential sleeping areas; however, certainly for tourists and visitors to the Interpretive Center and hiking trails noise will be disturbing. Map 23 in Attachment X-1 does not even show the Oregon Trail.
2. Within OAR 345-022-0040 Protected Areas and ODEQ standards 340-035-0000-0100, this area should have been monitored and modeled as a Noise Sensitive Property and was not.
3. Does not comply with Scenic Values from the Blue Mountains Parkway and Oregon Trail Interpretive Center. The OR 86 encourages drivers to STOP and read interpretive signs, so viewer perception and resource change cause significant decrease of scenic vales. IPC says no significant impact.
4. The DPO does not comply with Exhibit L Protected Areas. The BLM ACEC at Flagstaff Hill has not considered undergrounding for the protection of the Oregon Trail. No analysis found the pristine, Class 1 swales of the Oregon Trail within the ACEC located at: Lat 44.813762 Long -117.750194 or 44° 48' 48.26"N 117° 75' 57.97"W. IPC proposes to build a new constructed road over the Oregon Trail in the area identified in the location above.
5. The DPO does not meet the standards required for Exhibit T Recreational Facilities, OAR 345-022-0100, especially at the Flagstaff Hill interpretive center, because of:
  - a. It is a BLM ACEC area managed for public tourism

- b. It is the single most visited tourist facility in Baker County
  - c. The quality of the facility is outstanding
  - d. There is no other place where the Oregon Trail can be seen and interpreted.
6. The cost estimates of IPC do not compare with those of the *Edison Electric Institute*, January 2013 publication "Out of Sight, Out of Mind, An Updated Study of the Undergrounding of Power Lines." This article suggests that for 2.5 miles of rural undergrounding, the cost will be \$67,500,000. This is almost half the IPC estimate.

The Oregon Trail along the route of the B2H has the most damaging affects to its critical historic elements. Once the Trail is gone it cannot be reconstructed or mitigated back to life. Once gone, always gone. The only easily accessible public facility in Oregon is the Flagstaff Hill Interpretive Center near Baker City. The B2H must be buried to preserve this important site.

Considering the reasons above and the unconscionable desecration of our national treasure, the Council Must Deny the site certificate for the Boardman to Hemingway Transmission project.

Thank you,



Signature

Printed Name: Robin Spangler

Mailing Address: 1311 0 Ave, La Grande, OR 97850 #5

Email:



1112 1/2 Adams Ave  
La Grande, OR 97850

POSTMARKED ON 5/2  
17 AUG 2019 PM 4 L



Energy Facility Siting Counsel  
Attn: V. Tardeweth  
Oregon Dept. of Energy  
550 Capitol St., NW  
Salem, OR 97301-3742

RECEIVED

AUG 19 2019

DEPARTMENT OF ENERGY

97301-374239

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301  
email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

B2H EFSC LACK OF DOCUMENTATION FOR GREAT GRAY OWL AND  
FLAMMULATED OWL

The surveys provided for these two species are too old to be a reliable indicator of the presence or impacts to these bird species. They were done in 2011 and 2012, seven years ago. On Page P1-9, Table P1-1 the applicant proposes doing updated surveys only on areas not previously surveyed and submitting them to only ODOE. This type of secretive procedure where the public is completely removed from any opportunity to comment or review the decisions being made by ODOE is the basis for a great deal of public dissatisfaction with the process currently being supported by ODOE and EFSC.

There is no current information in the application to base any decision regarding what the impacts will be to these birds as a result of the Boardman to Hemingway Transmission Line. A site certificate cannot be issued determining compliance with OAR 345-022-0060 without knowing what the use of the area is by wildlife. In addition, since habitat category must include the use of the habitat by species, the habitat categories cannot be determined until the developer provides the necessary current information. Given that the area of the Ladd Marsh Wildlife area is not only protected, but also contains both federal and state mitigation areas, it is not possible to determine whether or not the development will have unacceptable impacts to these mitigation sites absent information regarding the use of the adjacent habitat by wildlife utilizing the mitigation sites and whether or not the habitat will be compromised making it unsuitable for use of the species due to impacts of the development. Considering the lack of information near Ladd Marsh Wildlife area, one must question why.

Ladd Marsh is an important Migratory Bird Flyway according to the Oregon Department of Fish and Wildlife (ODFW 2008.) The Audubon Society lists it as an Important Bird Area. The number of bird species using this area has expanded in the last several years, however, in 2008 over 230 species of birds had been recorded on LMWA and over 120 species nest in the area and yet the developer appears to be ignoring the importance of not only the wildlife area, but also the habitat surrounding the wildlife area which is critical to the survival of birds moving in and out of the mitigation sites.

Trinity Sprk

Signature/Name

Address:

1009 Forest Ct Lagrange OR 97850



## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Louise Squire <squirel@eoni.com>  
**Sent:** Tuesday, August 13, 2019 7:41 AM  
**To:** B2H DPOComments \* ODOE  
**Subject:** IPC's B2H project

Kellen Tardaaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street N.E.  
Salem, OR. 97301

August 13, 2019

B2H.DPOComments@Oregon.gov

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposal Order May 23, 2019.

To: Chairman Beyeler and Members of the Council

Idaho Power's construction of this power line is putting our community at risk! Specifically, I am very concerned about the risks to our communities during construction of the proposed transmission line. I take particular exception to the Exhibit G Materials Analysis, Attachment G-5 FRAMEWORK BLASTING PLAN. The document states; "This plan framework serves as baseline document to guide development of the complete Blasting Plan developed with the Plan of Development before issuance of the site certificate and commencement of construction."

On page 7, at 3.4, Design Feature 32 states; "Watering facilities (tanks, natural springs and/or developed springs, water lines, wells, etc.) will be repaired or replaced if they are damaged or destroyed by construction and/or maintenance activities to their pre-disturbed condition as required by the landowner or land-management agency. Should construction and/or maintenance activities prevent use of a watering facility while livestock are grazing in that area, then the Applicant will provide alternate sources of water and/or alternate sources of forage where water is available."

The stated purpose of blasting is to "crack" rocks to facilitate geotechnical drilling. Introducing new or expanded fissures/cracks into rock may alter the flow direction or amount of water to existing natural springs or wells.

Since there is no indication that Idaho Power will determine "predisturbed" water flow from wells or springs, how will the landowner prove that flow has been reduced? Without an agreed upon baseline, negotiation or legal action will be required. In the case of private landowners, that will mean legal expenses that may not be available.

Prior to the issuance of a Site Certificate, EFSC should require the additional condition:

ADDED CONDITION TO BLASTING PLAN, DESIGN FEATURES:

Idaho Power will determine baseline flow of natural springs or wells within ¼ mile of blasting site.

Exhibit G Materials Analysis, Attachment G-5 FRAMEWORK BLASTING PLAN on page 5 at

3.3 Safety Procedures, 3.3.3 Fire Safety: Posting fire suppression personnel at the blast site during high-fire danger periods and prohibiting blasting during extreme fire danger periods is not sufficient to minimize fire risk.

Idaho Power has written terminology, "high-fire danger periods" and "extreme fire danger periods" without definition or concurrence with Oregon Department of Forestry. Fire Suppression Personnel have been previously identified in the Fire Suppression and Prevention Plan as a "watchman."  
This is inadequate!

ADDED CONDITION TO BLASTING PLAN, FIRE SAFETY:

During blasting Idaho Power will provide a water tender staffed by a crew of at least two personnel.

Sincerely,

Louise Squire

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Name: Louise Squire

Address: 2105 Oak St.  
La Grande, Oregon 97850

--

"Going completely vegetarian one day a week for a year is equivalent to not driving 1,160 miles."



**ESTERSON Sarah \* ODOE**

---

**From:** Louise Squire <squirel@eoni.com>  
**Sent:** Tuesday, August 20, 2019 12:33 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** IPC's B2H project

August 20, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst Oregon Department of Energy  
550 Capitol Street N.E.  
Salem, OR. 97301

Via E-MAIL: B2H.DPOComments@Oregon.gov

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018;  
Draft Proposed Order 5/23/2019

To: Chairmen Beyeler and Members of the Council

I appreciate the opportunity to comment on the Draft Project Order for the Boardman to Hemingway Transmission Project. I am very supportive of the Oregon California Trails Association (OCTA) and the work that they have done to protect the Oregon Trail, especially here in Oregon. OCTA is mentioned numerous times in Exhibit S and the Historic Properties Management Plan and Programmatic Agreement. OCTA does NOT believe that Exhibit S Historic Properties Management Plan is complete in 7.2.3 Field Crew, and offers this additional condition.

ADDITIONAL CONDITION #1 OCTA recommends that the Council add an Oregon Trail expert to the Cultural Resource Team. This Oregon Trail individual will have qualifications similar to Field crew members. For example, they will have an undergraduate degree in anthropology, archaeology, or in a field such as geology, engineering or history. It will not be necessary to have attended a field school. This individual will be recommended by the National OCTA President and agreed to by the Field Director.

The field surveys, even with SHPO and NPS data, have missed and/or mislabeled some sections of the emigrant trail. OCTA wants the public to know where the Trails are and I do too! OCTA over the years has marked the trail location with wooden signs, small triangles attached to trees, and more recently, carbonite posts and steel rails. Most private property owners are proud of the trail on their property, and after obtaining permission allow the public to walk and hike on the trail.

Idaho Power and their consultants have not acknowledged trail crossings shown on submitted Maps and do not acknowledge visual intrusion of the line for 10 miles per standards, and only upon ODOE's RAI's, put into documents some trail protections. This has been consistent from the BLM process to current day.

Considering the points above, Idaho Power does not comply with the state standards for cultural resources OAR 354-022-0090, or 345-022-0080, Scenic resources. EFSC Must Deny the Site Certificate!

\_\_Louise Squire\_\_\_\_\_  
Signature  
Printed name: Louise Squire

Mailing address: 2105 Oak St, La Grande, Oregon 97850

Email address: squirrel@eoni.com  
phone number: (optional)

--

"Going completely vegetarian one day a week for a year is equivalent to not driving 1,160 miles."



## **ESTERSON Sarah \* ODOE**

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**From:** Louise Squire <squirel@eoni.com>  
**Sent:** Tuesday, August 20, 2019 12:37 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** B2H Letter

August 20, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst Oregon Department of Energy  
550 Capitol Street N.E.  
Salem, OR. 97301

Via E-MAIL: B2H.DPOComments@Oregon.gov

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018;  
Draft Proposed Order 5/23/2019

To: Chairmen Beyeler and Members of the Council

I appreciate the opportunity to comment on the B2H Draft Proposed Order.  
The Oregon National Historic Trail will be significantly affected by the B2H Transmission Line.

The Draft Proposed Order identifies significant impacts to the Oregon Trail in several Exhibits, including Exhibit C: Property Location and Maps; Exhibit L: Protected Areas; Exhibit R: Scenic Aesthetic Values; Exhibit S: Cultural Resources; Exhibit T: Recreational Facilities; and Exhibit X: Noise.

B2H crosses the Oregon Trail at least 8 times. EFSC has done a reasonable job of protecting the Trail during construction and operation, if the proposed requirements are followed, except at the Oregon Trail Interpretive Center at Flagstaff Hill.

The B2H Transmission Line should be buried for approximately 2 to 2 ½ miles to comply with the exhibits indicated above. Idaho Power has from the early years refused to do any significant analysis for this option. IPC uses cost as the reason for stating that undergrounding is not feasible. Cost is not a specific standard, and costs are the responsibility of the Oregon Public Utilities Commission during rate considerations. EFSC has determined that IPC has the Financial ability even if some partners choose to not participate, so reasonable cost should not be a determining factor for EFSC.

EFSC should refuse to approve the Draft Project Order for the following reasons:

1. Does not comply with Noise Standards as no measurements were done at the Oregon Trail viewpoint or walking trails endpoint near milepost 146. Perhaps not a "Noise Sensitive Property," in the context of residential sleeping areas; however, certainly for tourists and visitors to the Interpretive Center and hiking trails noise will be disturbing. Map 23 in Attachment X-1 does not even show the Oregon Trail.
2. Within OAR 345-022-0040 Protected Areas and ODEQ standards 340-035-0000-0100, this area should have been monitored and modeled as a Noise Sensitive Property and was not.
3. Does not comply with Scenic Values from the Blue Mountains Parkway and

Oregon Trail Interpretive Center. The OR 86 encourages drivers to STOP and read interpretive signs, so viewer perception and resource change cause significant decrease of scenic values. IPC says no significant impact.

4. The DPO does not comply with Exhibit L Protected Areas. The BLM ACEC at Flagstaff Hill has not considered undergrounding for the protection of the Oregon Trail. No analysis found the pristine, Class 1 swales of the Oregon Trail within the ACEC located at: Lat 44.813762 Long -117.750194 or 44° 48' 48.26"N 117° 75' 57.97"W. IPC proposes to build a new constructed road over the Oregon Trail in the area identified in the location above.

5. The DPO does not meet the standards required for Exhibit T Recreational Facilities, OAR 345-022-0100, especially at the Flagstaff Hill interpretive center, because of:

- a. It is a BLM ACEC area managed for public tourism
- b. It is the single most visited tourist facility in Baker County
- c. The quality of the facility is outstanding
- d. There is no other place where the Oregon Trail can be seen and interpreted.

6. The cost estimates of IPC do not compare with those of the Edison Electric Institute, January 2013 publication "Out of Sight, Out of Mind, An Updated Study of the Undergrounding of Power Lines." This article suggests that for 2.5 miles of rural undergrounding, the cost will be \$67,500,000. This is almost half the IPC estimate.

The Oregon Trail along the route of the B2H has the most damaging effects to its critical historic elements. Once the Trail is gone it cannot be reconstructed or mitigated back to life. Once gone, always gone. The only easily accessible public facility in Oregon is the Flagstaff Hill Interpretive Center near Baker City. The B2H must be buried to preserve this important site.

Considering the reasons above and the unconscionable desecration of our national treasure, the Council Must Deny the site certificate for the Boardman to Hemingway Transmission project.

Thank you,

\_\_Louise Squire\_\_\_\_\_  
Signature

Printed Name: Louise Squire

Mailing Address: 2105 Oak St, La Grande, Oregon 97850

Email: squirrel@eoni.com

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"Going completely vegetarian one day a week for a year is equivalent to not driving 1,160 miles."



**ESTERSON Sarah \* ODOE**

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**From:** Louise Squire <squirel@eoni.com>  
**Sent:** Tuesday, August 20, 2019 12:45 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** B2H DPO comment

August 20, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Siting Senior Analyst Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR 97301

Via EMAIL: B2H.DPOComments@Oregon.gov

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018;  
Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

Re: Geological Hazards and Soil Stability; Exhibit H.

Re: Geologic Hazard Protection - Drill site 95/3 and 95/4 on unstable and steep slopes in an active seismic zone My comment addresses the danger that construction and operation of an additional transmission line in an active seismic zone presents to the public, both local area residents and travelers on the nearby Interstate 84.

The relevant standard is the 345-022-0020 Structural Standard:

“(c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility;”

(d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035.

The construction process is described in detail in 3.9 Mitigation of the Exhibit H of IPC's ASC. Specifically, the area at or near Drill site 95/3 and 95/4 is shown and described on the following tables and maps:

Exhibit H – Attachment H-1 Appendix B Soils Data Tables and Maps by Shannon & Wilson, Inc.:

Map page 18 of 44:

Table B3: Soil Descriptions, described as:

5776CN; erosion hazard; severe, percent of slope Low; 30: High; 60. Sheet  
3 of 4

Exhibit H – Appendix C: Summary of Proposed Boring Locations:

Map Sheet 36 - Drill site 95/3 and 95/4

Exhibit H – Table C1: Summary of Proposed Borings – Sheet 2 of 8

95/3 – cited for Angle change along alignment; Slope stability/landslide; Geo-Seismic Hazard; Road and railroad crossing

95/4 – cited for Angle change along alignment; Road and railroad crossing Exhibit H - Appendix E: Landslide Inventory, E.2.3; PLS-002 Sheet 5,6

“PLS-002 is an approximately 460-acre potential landslide that was identified in available LiDAR data. PLS-002 has not been verified in the field and should not be considered a landslide based solely on interpretation of LiDAR data. The IPC Proposed Route passes above this potential landslide between towers 93/5 and 95/3, potentially affecting the stability of these proposed towers and associated work areas. A field reconnaissance along this portion of the alignment should be performed as part of the geotechnical exploration program.”

The relevant standard is the 345-022-0020 Structural Standard:

“(c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility;”

(d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).

The applicant has not fully described the risks of heavy construction in this area. What mitigation methods would be required to place earthquake resistant towers on unstable slopes, in an active seismic zone, if the area suffered an earthquake of the intensity that formed these slopes.

Special Paper 6, included on the DOGAMI website, describes an extensive study done in 1979 by the Geoscience Research Consultants in Moscow, Idaho and State of Oregon Department of Geology and Mineral Industries on the seismic history of the Blue Mountains and the La Grande area. The introduction of this paper is closes as follows: “In summary, consistencies of structural trends, compatibility of the Blue Mountain folding to backslope faulting in the La Grande area and systematic distribution in the orientation of linear trends favor northwesterly compression as the tectonic control in the study area. Furthermore, the general lack of interference, or lateral offset of linears or of any of the intersecting faults, as is discussed in the next sections, suggest that all of the post-Columbia River Basalt Group structures in the area near La Grande have been created in response to only one major tectonic episode.”

Further in the same paper “The Graves Creek-Rock Creek-Coyote Creek area has the greatest density of faults within the study area. At least six major and several minor northwest-trending faults of the Rock Creek fault system occur in the area (Plate 1). The Graves creek fault can be traced from the eastern edge of Sec. 7, T35S, R37E to the southern boundary of the Hilgard 7 ½ - minute quadrangle, a distance of about 6 mi (10 km). The Graves Creek fault probably extends farther southeastward beyond the map area. Offset across this fault is 265 ft (80 km) in Sec. 34, T 35S, R37E.”

The IPC ASC to the EFSC (Exhibit H – Attachment H-1, page 28) includes the following brief description of the area: The Mt. Emily Section (802) is described as “an 18 mile fault, forming a steep range front from Thimbleberry Mountain to the mouth of the Grande Ronde River Canyon, by Personius, compiled by the U.S. Geological Survey website and assessed in 11/16/2016.”

“The West Grande Ronde Valley fault zone may be active. Subtle topographic features indicate that there may have been earthquakes that broke through the ground surface as recently as the last 10,000 years.

Previous studies indicate that the West Grande Ronde Valley fault is capable of generating a magnitude 7 earthquake.” From Summary of the La Grande Quadrangle Geology” also on DOGAMI website.

DOGAMI recommendations for protection of the Portland’s infrastructure HUB in the secondary flood zone of a possible Cascadia Subduction Fault earthquake/tsunami have been largely unimplemented for lack of funding, as is the ShakeAlert system which, unless funded will not be available in Oregon until 2021 at the earliest. ShakeAlert is an early warning system being developed by USGS. Oregon made national news when “Governor Brown signed HB 3309, which amended the previous law to no longer prohibit the construction of building such as hospitals and schools and other emergency-preparedness centers in tsunami inundation zones along the coast.

The bill had bipartisan support and bucked standards held for twenty-five years keeping those facilities out of harm’s way should a massive tsunami hit.” Wisely, some cities along the coast continue following original DOGAMI assessments and recommendations concerning new infrastructure built away from the inundation zone. How this will impact funding assistance to move the existing schools, hospitals, city halls and emergency services?

Clearly Oregon legislative priorities have moved away from seismic hazard emergency preparedness, but this potential hazard to the area brings with it considerable risks, despite the proposed construction “mitigation”

methods. It is within the EFSC’s judgment to decide against adding an additional hazard to the natural and infrastructure hazards the citizens of this area already live with.

There are dangers both to human safety and the environment with an additional transmission line in a possibly quite seismic area, so close to the heavily traveled I84 transportation/utility corridor, the Hilgard Junction State Recreation



Area and the Grande Ronde river. Further study and subsequent intrusive construction will not reduce the risks to the safety of the travelers through this canyon or the residents of the valley nearby. The application does not comply with the relevant standard.

Remedies:

Additional study of the probable seismic hazards; including ground failure, landslide, cyclic softening of clays and silts, etc. as required by OAR 345-022-0020, Rev. subsection 12. "The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule seismic hazard includes ground shaking, ground failure, landslide, liquefaction, triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction.

Disqualify this route as an unreasonable risk for a site for an additional high voltage power facility and too close in proximity to Hilgard State Recreational Area, and the I84 transportation/utility corridor.

Additional letter of credit dedicated solely for financial restitution necessary to restore potential damage caused by any of the above in an amount sufficient to restore the surrounding environment and infrastructure, both publicly and privately owned.

Thank you for your consideration,

Sincerely,  
Louise Squire

Name: Louise Squire

Address: 2105 Oak St, La Grande, Oregon 97850

Email: squirrel@eoni.com

References

Barrash, Warren, John G Bond, John D. Kauffman, and Ramesh Venkatakrishnan, 1980, Geology of the La Grande Area, Oregon: Oregon Department of Geology and Mineral Industries Special Paper 6.

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Burns, W. J., Mickelson, K. A., Saint-Pierre, E. C., 2011 SLIDO-2, Statewide Landslide Information Database for Oregon, Release 2; Oregon Department of Geology and Mineral Industries.

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Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

Oregon Department of Energy, Energy Facility Siting Council, OAR Amend: 345-022-0020; Structural Standard EFSC 2-2017 Chap. 345, Division 22; General Standards for Siting Facilities. Effective date: 10/18/2017.

Idaho Power Corporation, 2017, Exhibit H of the Application for the Boardman to Hemingway Transmission Line Project: Report Prepared by Idaho Power Corporation, Boise, Idaho.

Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho January 25, 2018, Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035, page 28 and elsewhere.

Loew, Tracy, Salem Statesman Journal ; June 24, 2019 Oregon Legislature Repeals Tsunami Zone Building Law.

Personius, S. F. Compiler, 202c, Fault number 802a West Grande Ronde Valley fault zone, Mount Emily section, in Quaternary fault and fold database of the United States: U. S. Geological Survey website

<http://earthquakes.usgs.gov/hazards/qfault>, accessed 11/16/2016 06:23 PM Schlicker, H. G. and Deacon R. J. 1971 Engineering Geology of the La Grande Area, Union County, Oregon: Oregon Department of Geology and Mineral Industries Open File Report O-1971-03, 16 p., 1 plate, scale 1;24,000.

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"Going completely vegetarian one day a week for a year is equivalent to not driving 1,160 miles."



**From:** Louise Squire <squirrel@eoni.com>  
**Sent:** Wednesday, August 21, 2019 5:44 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** B2H DPO comment EMF  
**Attachments:** EMF A B2H magnetic fields.docx

The letter below is also sent as an attachment in case that is easier for you.

August 20, 2019

Kellen Tardaewether, Senior Siting Analyst Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301  
Email: B2H.DPOComments@Oregon.gov

Magnetic Fields from 500 kV line create a public health risk

The Draft Site Certificate allows up to 9mA of exposure. While this is the standard that is being used, it has had no formal review by the statutorily required review committee for at least 15 years or longer. ORS 469.480(4) states, "The council by rule shall form an Electric and Magnetic Field Committee which shall meet at the call of the council chair. The committee shall include representatives of the public, utilities, manufacturers and state agencies. The committee shall monitor information being developed on electric and magnetic fields and report the committee's findings to the council. The council shall report the findings of the Electric and Magnetic Field Committee to the Legislative Assembly." This requirement is repeated in OAR 345-022-0000.

In spite of the clear legislative and rule requirement, the Oregon Department of Energy and Energy Facility Siting Council have refused to establish this committee in spite of a specific request that they do so.

The standard has not been reviewed for over a decade, in spite of the fact that it is one of the highest in the nation and the world for residences.

The last time there was any consideration, it was not as a result of a multi-expertise group, but was conducted by a single person, Dr. Kara Warner. She clearly recommended that the committee should be meeting on an ongoing basis in her report.(EFSC 2009).

The Oregon Department of Energy and EFSC continue to make unilateral decisions in spite of the fact that they do not have the expertise represented by the stakeholders required by the legislature to be reviewing this issue and in spite of the mounting evidence indicating this standard is too high. For example, the National Electric Safety Code limits workplace exposure to 5 mA and the National Radiation Laboratory states workplace limits should not be used for the public. The limits need to be lower due to potential prolonged exposure, and different ages, health, etc. They indicate induced current should not exceed 2 mA for public exposure.

The following is a testimonial by a friend who has become an Electro-sensitive person. She has had to move because of this new sensitivity.

"I am 68 years old. When I moved from Salem to a new house in Washougal, Washington in 2018, I quickly, within a month, developed loud ringing in my right ear, nerve pain in my toes, etc. The new house was 1/2 mile from a 6-line, 230 kV high-power transmission line. These symptoms subsided when I left the city. But returned easily when I drove by high-power lines, or was near cell phones, modems, etc. I had become what they call an "Electro-sensitive" person...

Treatment helped greatly, but I sold my house in Washougal in order to move away from the power lines, and I am better. Recently, I visited La Grande.

One day I walked up the end of 12th/Bushnell Street to the top of Glass Hill. The 2nd day I walked along B Street. The ringing in my ears returned and was blasting by the time I finished each walk. I realized that I had been walking 1/4 - 1/2 mile from the 230 line. (The 230 line is the major high power transmission line on the south side of La Grande.) When I returned to my friend's house by Pioneer Park in La Grande, the ringing gradually subsided over a few days.

This pattern has repeated itself in other similar situations. If I was a Resident of La Grande and lived in the area of the proposed B2H line, I would be greatly concerned and would work to safeguard the health of myself and my community."

Natalie Arndt

July 23, 2019

My fear is that people in La Grande would develop electromagnetic sensitivities if a 500kV line is installed on the edge of La Grande and would have to move from their houses to protect their health.

Therefore, due to Natalie's experience and the mounting evidence that a health and safety issue exists due to the large amount of exposure being allowed and the fact that the council has not met the requirements of the statute specifically requiring them to do so, the site certificate cannot be issued. In order to issue a site certificate, the required committee must be brought together, a review of the appropriate amount of exposure needs to occur, and this issue needs to be reviewed based upon credible, current research and standards being used by other agencies and groups.

Louise Squire

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97850

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--

"Going completely vegetarian one day a week for a year is equivalent to not driving 1,160 miles."



August 20, 2019

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301  
Email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

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Natalie Arndt

July 23, 2019

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Louise Squire

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# RECEIVED

AUG 23 2019

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301  
email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

DEPARTMENT OF ENERGY

THE DRAFT PROPOSED ORDER FOR THE BOARDMAN TO HEMINGWAY TRANSMISSION LINE FAILS TO IDENTIFY AND MITIGATE FOR IMPACTS TO CRITICAL HABITAT FOR BULL TROUT OR PROVIDE SITE CERTIFICATE REQUIREMENTS THAT ASSURE THAT THE DEVELOPMENT WILL NOT SIGNIFICANTLY IMPACT THEIR POTENTIAL RECOVERY

Exhibit P, OAR 345-021-0010(1)(p) requires the identification of all fish and wildlife at the proposed location and identification of the habitat classification categories as set forth in OAR 635-415-0025.

This information is necessary in order to comply with the requirements of OAR 345-022-0060 requiring the identification of habitat categories and required mitigation. Bull trout are listed as a Threatened species by the USFWS. While the Oregon Department of Energy has been unwilling to recognize federally listed threatened and endangered species under OAR 345-022-0070, there remains a requirement that they at a minimum demonstrate a robust effort to protect their habitat under OAR 345-022-0060. As a part of the federal determination, critical habitat is identified in the Federal Register, Vol. 80, No. 107, Thursday, June 4, 2015 (Attached). In addition, the Recovery Plan for the Coterminous United States Population of Bull Trout (attached) shows the river sections considered "critical" to the recovery of this fish.

1. Idaho Power need not complete surveys for this threatened fish, or make any determination regarding their presence, or the presence of fish in the watersheds that include critical habitat. The entire watershed is protected when it is determined that it contains federally threatened or endangered fish species. Idaho Power has failed to incorporate information regarding identification of the habitat category or locations which will be impacted by their proposed development in relation to it being Category 1 habitat. Bull trout habitat is known to exist in Malheur, Umatilla, Union and Baker counties and critical habitat is specifically identified in the federal law recording their listing. In addition, the attached document addressed to Representative Greg Barreto from the Oregon Legislative Council Committee, Dated April 20, 2017, regarding the legality of not including federally listed species under OAR 345-022-0070 clearly indicates that in their estimation, so long as they are addressed under OAR 345-022-0060, the State of Oregon would not be out of compliance with the federal law. The current application and site certificate fails to include requirements that would assure that the state is complying with federal laws in providing habitat protection for this listed species.

to the recreational economy of Eastern Oregon and the severe economic damages that will result if the fish category were raised to "Endangered", the information needs to be made available to the impacted counties for their review and comment.

Under the current draft proposed order, Idaho Power does not meet the requirements for issuing a site certificate due to the failure to identify and avoid damages to Category 1 habitat. This conflicts with the habitat mitigation, threatened and endangered species and recreational standard requirements contained in OAR 345-022-0080 as noted above.

Sincerely,

Louise Squire  
Louise Squire  
2105 Oak St  
La Grande, Or  
97850



patterns, including breeding, feeding or sheltering.”<sup>7</sup> The take prohibition applies to any “person,”<sup>8</sup> including individuals, businesses and federal, state and local governmental bodies.<sup>9</sup>

Section 10 of the federal ESA provides a mechanism to allow private landowners to take threatened and endangered species “if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.”<sup>10</sup> A private landowner can avoid potential liability for taking a threatened species by obtaining an incidental take permit (ITP).<sup>11</sup> In exchange for permission to “take” a listed species pursuant to an ITP, the permit applicant must commit to implementing a plan that “conserv[es]”—i.e., facilitates the recovery of—the species.<sup>12</sup> This plan is called a Habitat Conservation Plan (HCP) and it must delineate “the impact which will likely result from such taking” and the “steps the applicant will take to minimize and mitigate such impacts.”<sup>13</sup>

### *Oregon State Law*

The Oregon Endangered Species Act (Oregon ESA) is far more limited in scope than its federal counterpart.<sup>14</sup> The law provides for the state listing and conservation of threatened and endangered species. The Director of Agriculture or the State Fish and Wildlife Commission (FWC), as appropriate, determines which species are on the state lists.<sup>15</sup> As a result, Oregon’s threatened and endangered species lists do not necessarily mirror the federal ESA lists. In fact, it is part of Oregon’s stated environmental policy to minimize duplication and overlap between state and federal laws dealing with threatened or endangered species.<sup>16</sup> To that end, unlike the federal ESA which applies to individuals, businesses, and federal, state and local governmental bodies, the Oregon ESA generally focuses only on state lands and state management activities such as permitting.

Passed in 1987, the Oregon ESA underwent revisions that outlined listed species protection requirements in 1995.<sup>17</sup> For threatened or endangered species listed by the state during or after 1996, the FWC is directed to establish by rule quantifiable and measurable guidelines that it considers necessary to ensure the survival of individual members of the species.<sup>18</sup> The guidelines “may include take avoidance and protecting resource sites.”<sup>19</sup> If a species is listed as threatened, state agencies are required to determine whether “a proposed action on land it owns or leases, or for which it holds a recorded easement, has the potential to violate the [survival] guidelines established” by the commission.<sup>20</sup> If the potential exists, the agency must work with the State Department of Fish and Wildlife (ODFW) to either pursue reasonable and prudent alternatives to the proposed action, or to take other actions to minimize adverse impacts on the affected species.<sup>21</sup>

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<sup>7</sup> 50 C.F.R. 17.3.

<sup>8</sup> 16 U.S.C. 1538(a)(1).

<sup>9</sup> 16 U.S.C. 1532(13).

<sup>10</sup> 16 U.S.C. 1539(a)(1)(B).

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*; 16 U.S.C. 1539(a)(2)(A); see also *Sierra Club v. U.S. Fish and Wildlife Serv.*, 245 F.3d 434, 441–442 (5th Cir. 2001) (“[c]onservation’ is a much broader concept than mere survival” because the “ESA’s definition of ‘conservation’ speaks to the recovery of a threatened or endangered species.”).

<sup>13</sup> 16 U.S.C. 1539(a)(2)(A).

<sup>14</sup> ORS 496.171 to 496.192.

<sup>15</sup> ORS 496.176 (2), ORS 564.110 (2).

<sup>16</sup> ORS 496.182 (1).

<sup>17</sup> Chapter 590, Oregon Laws 1995.

<sup>18</sup> ORS 496.182 (2)(a).

<sup>19</sup> *Id.*

<sup>20</sup> ORS 496.182 (3).

<sup>21</sup> ORS 496.182 (3), (4).

may be required to apply separately to the Secretary of the Interior for an ITP under section 10 of the federal ESA in addition to the application to EFSC.<sup>32</sup>

Despite the EFSC's recent rule change, applicants for energy facility site certificates must continue to identify *all* threatened and endangered species that may be affected by the construction and operation of the proposed facility, regardless of whether those species are listed on the federal or state list. First, the applicant must disclose any affected state listed species to the EFSC in Exhibit Q of its site certificate application.<sup>33</sup> Second, the applicant must identify all additional fish and wildlife species and habitat that may be affected by the project in Exhibit P of the site certificate application, which would include any federally listed species.<sup>34</sup> Third, if any of the potentially affected species are listed on the federal endangered or threatened species list, the federal ESA may require the applicant to apply separately to the Secretary of the Interior for an ITP.<sup>35</sup> Accordingly, the EFSC's recent rule change does not appear to be in conflict with any applicable federal laws because applicants must still identify *all* fish and wildlife species and habitat that may be affected by the project in the site certificate application. In addition, the federal ESA continues to apply to energy facility site certificate applicants.

## 2. ORS 183.720 Administrative Rule Review

As a member of the Legislative Assembly, you may request that the Legislative Counsel review an adopted rule of a state agency.<sup>36</sup> When reviewing a rule, the scope of review of this office is limited to:

- Determining whether the rule appears to be within the intent and scope of the enabling legislation purporting to authorize its adoption; and
- Determining whether the rule raises constitutional issues other than falling outside of the intent and scope of the law.<sup>37</sup>

You have asked our office to review OAR 345-021-0010 (1)(q)(A), as amended effective March 8, 2017. OAR 345-021-0010 sets forth specific information that must be provided with applications for energy facility site certificates. Prior to March 8, 2017, OAR 345-021-0010(1)(q)(A) required applications to include:

Information about threatened and endangered plant and animal species that may be affected by the proposed facility . . . [b]ased on appropriate literature and field study, identification of all threatened or endangered species listed under ORS 496.172 (2), ORS 564.105 (2) or 16 USC Sec. 1533 that may be affected by the proposed facility.<sup>38</sup>

ORS 496.172 (2) refers to Oregon's list of threatened and endangered wildlife species, as identified by the FWC. ORS 564.105 (2) refers to Oregon's list of threatened and endangered

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<sup>32</sup> 16 U.S.C. 1539(a)(1)(B).

<sup>33</sup> OAR 345-021-0010 (1)(q).

<sup>34</sup> OAR 345-021-0010 (1)(p).

<sup>35</sup> 16 U.S.C. 1539(a)(1)(B).

<sup>36</sup> ORS 183.720.

<sup>37</sup> ORS 183.720 (3).

<sup>38</sup> OAR 345-021-0010(1)(q)(A) (prior to March 8, 2017).



and state listed threatened and endangered species that may be affected by the proposed facility in Exhibit Q of the site certificate application. Presumably, OAR 345-021-0010 (1)(q) was enacted to require applicants to provide EFSC with the information it needs to comply with OAR 345-022-0070; however, OAR 345-022-0070 does not apply to federally listed threatened and endangered species. Accordingly, in March, the EFSC amended OAR 345-021-0010 (1)(q) to remove the requirement that developers identify federally listed threatened and endangered species in Exhibit Q. Nevertheless, developers must still identify state listed threatened and endangered species in Exhibit Q. Furthermore, developers must still identify any other fish and wildlife species and habitat which may be affected by the proposed project (which would include any affected federally listed species) in Exhibit P of the site certificate application.<sup>47</sup>

The EFSC is tasked with prescribing standards and rules for the siting of facilities under ORS 469.470 and 469.501. The only reference in either ORS 469.470 or 469.501 to endangered or threatened species is in ORS 469.501 (1) regarding the discretionary authority of the EFSC to develop standards regarding the effects of proposed facilities on fish and wildlife, including threatened or endangered species. Accordingly, we believe that the EFSC's removal of the requirement in OAR 345-021-0010 (1)(q)(A) that applicants for site certificates identify federally listed threatened or endangered species in Exhibit Q of the site certificate application meets the EFSC's duties to prescribe standards and rules for the siting of facilities under ORS 469.470 and 469.501 because there is no express statutory requirement that EFSC consider federally listed threatened and endangered species when it issues site certificates. Furthermore, EFSC still requires applicants to identify state and federally listed species on site certificate applications, albeit in different exhibits. For these reasons, we conclude that the rule adopted by the EFSC falls under the broad rulemaking authority of the EFSC, is within the intent and scope of the enabling legislation and does not raise any additional constitutional issues.

The opinions written by the Legislative Counsel and the staff of the Legislative Counsel's office are prepared solely for the purpose of assisting members of the Legislative Assembly in the development and consideration of legislative matters. In performing their duties, the Legislative Counsel and the members of the staff of the Legislative Counsel's office have no authority to provide legal advice to any other person, group or entity. For this reason, this opinion should not be considered or used as legal advice by any person other than legislators in the conduct of legislative business. Public bodies and their officers and employees should seek and rely upon the advice and opinion of the Attorney General, district attorney, county counsel, city attorney or other retained counsel. Constituents and other private persons and entities should seek and rely upon the advice and opinion of private counsel.

Very truly yours,

DEXTER A. JOHNSON  
Legislative Counsel



By  
Lori Anne Sills  
Staff Attorney

---

<sup>47</sup> OAR 345-021-0010 (1)(p).

August 5, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301

RECEIVED

AUG 22 2019

DEPARTMENT OF ENERGY

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

APPLICANT FAILED TO INCLUDE ALL REQUIRED SOURCES OF NOISE IN THEIR MODELING OF NOISE IMPACTS OF DEVELOPMENT

Idaho Power did not include any of the items listed in OAR 340-035-0035(l)(b)(B)(ii), which are only exempt from the noise measurement when the development occurs on a previously used site. When establishing ambient noise level for a new development on a site not previously used, it states: "Sources exempt from the requirements of section (l) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this rule, shall not be excluded from this ambient measurement."

The applicant's noise modeling only includes the noise generated from the transmission line itself. Noise modeling must be corrected to include (b) Warning Devices, (c) sounds created by road vehicles, (d) Sounds from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576 ; (e) bells, chimes, or carillons; (f) aircraft subject to pre-emptive federal regulations and (k) sounds created by the operation of road vehicle auxiliary equipment.

The application is incomplete. Without having the information regarding these additional noise sources, the department and the siting council lack the information regarding how many noise sensitive properties are impacted and by how much.

A proposed order cannot be issued until the developer submits all the information regarding the noise impacts of this development. This information must be available to decide if the standard is met or if it can be met with additional site conditions.

Sincerely,

  
Signature

Printed Name:

Mailing Address:

Louise Spurre  
2105 Oak St  
La Grande, OR  
97850



# RECEIVED

AUG 22 2019

12 August 2019

Oregon Energy Facility Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E  
Salem, OR 97301

DEPARTMENT OF ENERGY

Dear Chair Beyeler and Members of the Council:

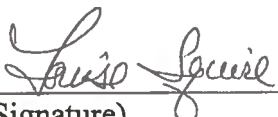
As I understand it, the applicant did not complete noise modeling on multiple noise sensitive properties within ½ mile of the development as required by OAR 340-035-0015(38). In fact, the closest noise modeling was performed at Hilgard, the junction of I-84 and 244, about 8 miles air miles away, with a train track near by. Applicant could scarcely have chosen a site less representative of the absolute silence typical of the Morgan Lake setting.

Page 145 (T-4-46) Baseline condition: "... A goal of minimal development of Morgan Lake Park should be maintained to preserve the maximum natural setting and to encourage solitude, isolation, and limited visibility of users..." Solitude, of course, suggests an absence of distraction from external stimuli including noise. Campers often comment on the tranquility of the park where a 5 mph speed limit is enforced to limit noise, and no shooting or motorized craft are allowed on the lake. Even when the campground is full, it's possible to picnic or hike beside the lake in absolute silence.

Noise Sensitive Property is "property normally used for sleeping, or normally used as schools, churches, hospitals, or public libraries. Obviously the noise corona of popping, humming transmission lines will interfere with the silence campers have every right to expect in a natural setting.

This transmission line is planned to be sited within 500' west of the park boundary, which would place it easily within less than 1/5 of a mile of overnight camp sites.

The applicant's ASC should be denied until all required and adequate noise modeling has been performed.

  
(Signature)

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DEPARTMENT OF ENERGY

B2H EFSC Exhibit K APPLICANT FAILED TO INCLUDE ALL EFU LANDS FOR PURPOSES OF 215.275 ANALYSIS

Exhibit K, 4.1.1.4 Non-EFU Alternatives

Idaho Power failed to include all farm land in the analysis required by ORS 215.275. Of critical concern are items (4) requiring restoration of agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility.

And (5) requiring that there be clear and objective conditions on the application for utility facility siting to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.

Idaho Power's analysis failed to include lands zoned as a combination of rangeland and farm use as farm land subject to the provisions of ORS 215.275

The failure to include all required land in the analysis results in a lack of compliance with the requirements of OAR 345-021-0010(l)(k) and OAR 345-022-0030. Due to this omission, the council cannot find the developer in compliance with ORS 469.504 or ORS 197.646 or OAR 345-022-0030.

The applicant states, "Several of the agricultural areas in the project area are zoned a combination of rangeland and farm use. Based on discussions with DLCD, IPC did not consider such hybrid zoned lands to be EFU lands for purposes of the ORS 215.278 analysis." This statement is not DOCUMENTATION as required for the application to be complete. There is no indication of who spoke with whom on what date, and nothing to document that the action actually occurred. Following is documentation taken directly from the LCDC rules that the combination zones are EFU and are required to be included in the ORS 215.278 analysis as well as the dictionary, IRS and FDA definitions of farm use which are consistent with the LCDC definition.

LCDC defines Exclusive Farm Use Zone in ORS 215.203(2)(a) as "farm use" means **the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof.—**"

Oxford Dictionary defines "farming" as "The activity or business of growing crops and raising livestock"

The Internal Revenue Service defines "farm" as "includes stock, dairy, poultry, fruit, furbearing animal, and truck farms, plantations, ranches, nurseries, ranges, greenhouses or other similar structures used primarily for the raising of agricultural or horticultural commodities, and orchards and woodlands."



The FDA defines "farm" as "an establishment under one ownership in one general physical location devoted to the growing and harvesting of crops, the raising of animals (or seafood), or both"

A failure to include all farm land in completing the requirements of ORS 215.275 means the applicant is not in compliance with OAR 345-022-0030 which is required in order to issue a site certificate or determine whether or not the application meets the standards. This understatement of farm lands is especially problematic due to the decision *Friends of Parrett Mountain v. Northwest Natural Gas Co.*, 336. iOr. 93, 108 (2003) requiring the determination to be "reasonable" meaning fair proper, just, moderate or suitable under the circumstances". This transmission line is being sited on a far greater percentage of agricultural private land in counties where the public land includes a much greater percent of the total lands in the counties. The omission of most agricultural lands from the 215.275 analysis also means that the stated percentage of total farm lands being taken from the counties is significantly understated.

Sincerely,

Louise Squire

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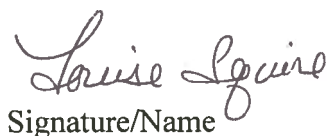
DEPARTMENT OF ENERGY

## B2H EFSC LACK OF DOCUMENTATION FOR GREAT GRAY OWL AND FLAMMULATED OWL

The surveys provided for these two species are too old to be a reliable indicator of the presence or impacts to these bird species. They were done in 2011 and 2012, seven years ago. On Page P1-9, Table P1-1 the applicant proposes doing updated surveys only on areas not previously surveyed and submitting them to only ODOE. This type of secretive procedure where the public is completely removed from any opportunity to comment or review the decisions being made by ODOE is the basis for a great deal of public dissatisfaction with the process currently being supported by ODOE and EFSC.

There is no current information in the application to base any decision regarding what the impacts will be to these birds as a result of the Boardman to Hemingway Transmission Line. A site certificate cannot be issued determining compliance with OAR 345-022-0060 without knowing what the use of the area is by wildlife. In addition, since habitat category must include the use of the habitat by species, the habitat categories cannot be determined until the developer provides the necessary current information. Given that the area of the Ladd Marsh Wildlife area is not only protected, but also contains both federal and state mitigation areas, it is not possible to determine whether or not the development will have unacceptable impacts to these mitigation sites absent information regarding the use of the adjacent habitat by wildlife utilizing the mitigation sites and whether or not the habitat will be compromised making it unsuitable for use of the species due to impacts of the development. Considering the lack of information near Ladd Marsh Wildlife area, one must question why.

Ladd Marsh is an important Migratory Bird Flyway according to the Oregon Department of Fish and Wildlife (ODFW 2008.) The Audubon Society lists it as an Important Bird Area. The number of bird species using this area has expanded in the last several years, however, in 2008 over 230 species of birds had been recorded on LMWA and over 120 species nest in the area and yet the developer appears to be ignoring the importance of not only the wildlife area, but also the habitat surrounding the wildlife area which is critical to the survival of birds moving in and out of the mitigation sites.

  
Signature/Name

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DEPARTMENT OF ENERGY

FAILURE TO PROVIDE SITE CONDITIONS TO MINIMIZE THE RISK TO  
GOLDEN EAGLES RESULTING FROM THE PROPOSED TRANSMISSION  
LINE ROAD DEVELOPMENT

This project will go through the area surveyed for the Antelope Ridge Wind Development. Due to the lack of meaningful information being provided by IP in their application, it is necessary to go to the 2010 formal letter information summary regarding projected habitat impacts from that development in the area to be crossed by the B2H transmission line. ODFW comments regarding the surveys completed identified 4 active golden eagle nests and recommended no new roads be constructed within 1 mile (1/2 mile line of site) of the nests. Construction and maintenance activities should not occur within 1 mile line of sight (1/2 mile non line of site) of nest between January 1 and July 15.

In the event that ODFW no longer believes these recommended restrictions are valid, they need to explain how a reduced period and distance will continue to provide protection for golden eagles from roads being built at the site in order to comply with OAR 345-022-0060 and their rules.

  
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AUG 23 2013

SETBACKS FROM RAPTOR NEST SITES

DEPARTMENT OF ENERGY

A 0.5 mile setback area around all sensitive raptor nests which includes all permanent and temporary disturbances associated with the proposed project is necessary to meet the requirement that the project not result in adverse population-level impacts to these species.

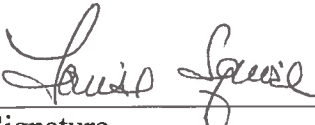
The Applicant identifies Category 1 Habitat for nest sites of golden eagle, Swainson's Hawk, goshawk, and burrowing owl. However, the applicant considers these point habitats with no associated range. While this approach is convenient, it is inconsistent with historical regulatory measures (e.g. forestry practices) regarding sensitive and threatened and endangered wildlife species in Oregon. In the Columbia Basin, Category 1 habitat associated with Washington ground squirrel colonies were defined as being occupied area AND its associated use area. The area around a natal site is integral to the continued use of the site. Wildlife need more than a specific point to be successful. ODFW has previously recommended a 1/2 mile setback (no impact) around all sensitive raptor nest sites. This buffer needs to include all permanent and temporary disturbances associated with the proposed project. The applicant has provided no population data for the potentially affected raptor species—especially the low density raptors (e.g. burrowing owls, goshawk and golden eagle) to show that the impacts to these species are sustainable to local populations of these species.

The current application fails to provide information necessary to determine habitat Category. Absent information that will identify the location of Category 1 habitat, it is not possible to issue a site certificate that provides that no Category 1 habitat will be impacted directly or indirectly by the development. This precludes a determination that the developer is able to site the transmission line in compliance with OARs 345-022-0060.

According to USFWS 501 FW 2, Appendix 2, the following information is necessary in order to determine habitat category determinations.

- (2) "Identify those special biological features or the area(s) in question that are considered pertinent to the resource category determination (i.e. species, species life stages, species life requisites, species groups and species diversity considerations). Also identify any special vegetative and physical site conditions that enter into consideration."
- (3) "In quantitative or qualitative terms, discuss the importance ascribed to the special features and conditions in number 2 above."
- (4) "As appropriate, discuss considerations for scarcity, abundance, irreplaceability, and/or uniqueness. Also discuss the geographic area of consideration associated with these characteristics."

Reference: 501 FW 2, Appendix 2 Checklist-Resource Category Documentation

  
\_\_\_\_\_  
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REMAINING THREE TOED WOODPECKER AND GOSHAWK SURVEYS NEEDED –  
BOARDMAN TO HEMINGWAY TRANSMISSION PROJECT

The developer has failed to complete surveying the proposed site for the presence of American Three Toed Woodpecker, and they do not plan to complete the survey work which has started. See Exhibit P1, PAGE PI-9.

These surveys need to be included in the site certificate application.

Three toed woodpecker species are listed as at risk of becoming extinct. The developer has not surveyed the entire length of the proposed transmission line and they are proposing no further surveys. This means that the Oregon Department of Energy is unable to determine that the developer will be in compliance with the Threatened and Endangered Species rules contained in OAR 345-022-0070 or the Habitat Mitigation rules in OAR 345-022-0060. The entire siting corridor needs to be surveyed prior to the start of construction and all accessible areas should have been provided as a part of the application. There remain 287 calling stations which need to be surveyed prior to making a determination regarding the impacts to Northern Goshawk and American Three-toed Woodpeckers.

The only way that EFSC and ODOE can be deemed to be in compliance with the federal Threatened and Endangered Species act is through a valid and complete assessment and mitigation for habitat impacts to threatened and endangered species. The current application and failure to require the completion of surveys for all remaining areas will place the Oregon Department of Energy and Energy Facility Siting Council in the position of being liable for any damages sustained by these rare and endangered species.

 Louise Squire  
Signature/Name

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## DEPARTMENT OF ENERGY

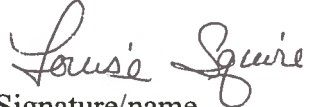
B2H EFSC FAILURE TO SURVEY ACCESSIBLE AREAS FOR NORTHERN GOSHAWK AND AMERICAN THREE-TOED WOODPECKER, FAILING TO PROVIDE CURRENT INFORMATION, AND FAILURE TO COMPLETE SURVEYS IN ACCESSABLE AREAS.

The developer indicates that reasons for incomplete surveys was because the landowners would not give permission, timing conflicts, or the need to cross parcels not approved to access the area. The applicant failed to survey 287 locations. Many are located along the applicant's "preferred option". In fact, it appears that no surveys were performed from Mile Post 95 to Mile Post 115 which is virtually the entire length of Idaho Power's preferred alternative near the city of La Grande. There are also many locations from approximately Mile Post 95 to Mile Post 105 which are accessible, but have not been surveyed. See Figure P1-1, Page P1-II of application.

Literally 1/3 of the required surveys have not been completed, and the surveys which were completed were done in 2011 and 2012. The limited additional surveys done in 2016 did not include American three-toed woodpeckers which are listed as sensitive in the analysis area. The developer is proposing no additional surveys be performed. The developer provided misleading information regarding the surveys when they listed in Figure P1-1 that surveys were completed in 2016. Only a small area was surveyed in 2016 and not for both species. In addition, none of the areas where the alternate route exists in Union County were surveyed. The applicant is proposing that a site certificate be issued based upon these dated, minimal surveys with no new surveys being conducted.

The lack of surveys in the areas near Ladd Marsh is very disturbing. There is the potential for both these bird species to be present in the area. It is part of the Survey Area, however, there are practically no surveys along the proposed line. There is no basis for failing to complete surveys on all areas that can be accessed. This project was initiated over 10 years ago. Completed surveys should have been provided in the application, not 2/3 of them. The applicant has failed to comply with the requirements of OAR 345-021-0060 regarding completion of surveys and cannot be found to be in compliance with OAR 345-022-0060.

The developer is proposing no additional surveys. The Site Certificate cannot be issued absent the developer providing current surveys of accessible areas. There is no exemption allowing a developer to provide no current information and no determination can be made regarding eligibility absent any reliable information regarding impacts to these protected birds. This material needs to be in the application prior to the Site Certificate being issued.

 Louise Squire  
Signature/name

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## INTERFERENCE WITH RADIO SIGNALS

High voltage transmission lines interfere with radio and television signals. This can be not only an inconvenience, but a safety and health issue. Agricultural workers often work alone and in areas not observable by others. They rely upon cell phones and other devices to obtain help in the event of an accident. In addition, modern farm equipment is often radio controlled. A 500 kV transmission line will interfere with the functioning of radio controlled equipment. These impacts will severely impact farm production and the cost of production due to requiring additional employees to perform functions that occur automatically when the equipment is working.

The site certificate needs to clearly identify the developer as having responsibility to take necessary action to resolve any interference with radio signals which impact farming operations. Failure to require such action needs to result in the inclusion of the increased costs in the cumulative impacts that will show a significant increase in the costs of farming operations due to the transmission line.

### Recommended Site Condition:

The developer will provide contact information for citizens to report suspected transmission line interference with radio, phone or equipment signals. Complaints will be followed up on within 30 days. The developer will take necessary action to remove the interference with radio signals relied upon by individuals engaged in farming operations.

Louise Squire  
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Louise Squire

July 27, 2019

Energy Facilities Sitting Council  
c/o Kellen Tardaewether, Sitting Senior Analyst  
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AUG 23 2019

DEPARTMENT OF ENERGY

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018;  
Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

I am an Eastern Oregonian and have traveled and recreated in the vicinity of Hilgard State Park for many years. I have concerns about the steep slopes, soils hazards, landslide risks, and erosion impacts that the construction of the Boardman to Hemingway Transmission line will pose in an already dangerous canyon.

Re: Soil Protection - Drill site 95/3 and 95/4 on unstable and steep slopes  
345-022-0020

(c) ...*The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soil hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility...*

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council;  
effective date 10/18/2017; agency approved date 09/22/2017.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500 kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, Lake Oswego, Oregon. 97035.*

**Drill sites 95/3 and 95/4** are shown on the following tables and maps and analysis by Shannon & Wilson, Inc.:

Soils; Map page 18 of 44:

Table B3: Soil Descriptions, described as:

5776CN; erosion hazard; severe, percent of slope Low; 30: High; 60. (sheet 3 of 4)

Table C1: Summary of Proposed Borings; Map Sheet 36

95/3 – Angle change along alignment; Slope stability/landslide; Geo-Seismic Hazard; Road and railroad crossing

95/4 - Angle change along alignment; Road and railroad crossing

Appendix E: Landslide Inventory, E.2.3; PLS-002 Sheet 5, 6

“PLS-002 is an approximately 460-acre potential landslide that was identified in available LiDAR data. PLS-002 has not been verified in the field and should not be considered a landslide based solely on interpretation of LiDAR data. The IPC Proposed Route passes above this potential landslide between towers 93/5 and 95/3, potentially affecting the stability of these proposed towers and associated work areas. A field reconnaissance along this portion of the alignment should be performed as part of the geotechnical exploration program.”

Idaho Power Corporation, in Exhibit H 2.2.4 states “*The soils (in Union County) vary from a few inches to a few feet thick over weathered bedrock, are generally well-drained, and are typically characterized as having a severe erosion hazard.*” Idaho Power Corporation admits in ASC page B-12 that “*The mountainous area such as the Blue Mountains present very challenging topography with many areas of steep slopes in excess of 35 percent and other areas of unstable slopes*”



*presenting design and construction challenges.” IPCs stated original intention to the EFSC was the following: “Using topographic maps the corridors were adjusted to avoid or minimize distance across very steep slopes and other physical features less desirable for construction and operation of a transmission line.*

**Hazard Analysis** Union County Emergency Operations Plan Updated 6/30/16 lists Winter weather as the highest weighted risk item before Seismic, Fire, Hazmat-Transportation, and Drought. Most of the area receives a large percentage of the annual moisture as snowfall and both the winter storms and the spring melt can be precipitous and unpredictable.

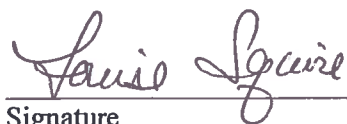
The area surrounding the drill site 95/3 and 95/4 is within a mile of the Hilgard Junction State Park and Recreation area and the heavily traveled I84 transportation/utility corridor.

**Conclusion and Requested Relief:**

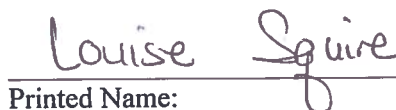
**Drill site 95/3 and 95/4, and its vicinity,** represent a significant risk of several possible adverse effects. This area encompassed by the lands shown in PLS-002 should be removed for consideration as a site for a transmission “facility.” While Idaho Power Corporation attempts to mitigate problems of unstable soil with structure and footing modifications, this should not be considered an acceptable risk when the entire area is unstable.

I appreciate your consideration and your attention to this matter.

Sincerely,



Signature



Printed Name:

Mailing Address:

2105 Oak St. La Grande, Or 97850

**References**

Burns, W. J., Mickelson, K. A., Saint-Pierre, E. C., 2011 SLIDO-2, Statewide Landslide Information Database for Oregon, Release 2; Oregon Department of Geology and Mineral Industries.

Idaho Power Corporation, 2017, *Exhibit H of the Application for the Boardman to Hemingway Transmission Line Project*: Report Prepared by Idaho Power Corporation, Boise, Idaho.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho* January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, lake Oswego, Oregon. 97035.

Permanent Administrative Order EFSC 2-2017 Chapter 345 Department of Energy; Energy Facility Siting Council; effective date 10/18/2017; agency approved date 09/22/2017.

Oregon Department of Energy; Energy Facility Siting Council – Chapter 345, Division 22 General Standards for Siting Facilities; OAR Amend: 345-022-0022; Soil Protection

Idaho Power Corporation, 2017, *Exhibit H of the Application for the Boardman to Hemingway Transmission Line Project*: Report Prepared by Idaho Power Corporation, Boise, Idaho.

*Geological Hazards and Soil Stability; Exhibit H. Attachment H-1, Engineering Geology and Seismic Hazards Supplement to Exhibit H Boardman to Hemingway 500kV Transmission Line Project Boardman, Oregon to Hemingway, Idaho* January 25, 2018; Shannon & Wilson, Inc. 3990 Collins Way, Suite 100, lake Oswego, Oregon. 97035, page 28 and elsewhere.

Union County, Oregon, Union County Emergency Operations Plan – Hazard Analysis. Updated – 6/30/2016.

August 5, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301

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AUG 23 2019

DEPARTMENT OF ENERGY

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

COMMENT REGARDING THE BOARDMAN TO HEMINGWAY TRANSMISSION LINE DRAFT PROPOSED ORDER

The application is incomplete as Section X must include information regarding all receptors within ½ mile of site and include all noise sources required to be included in establishing the noise level generated directly or indirectly by the development. Idaho Power has not provided information adequate to determine if they are able to meet the noise standard, even with site certificate conditions.

IDAHO POWER FAILED TO COMPLY WITH OAR 345-021-0010(1)(x) which states that Exhibit X must include information about noise generated by construction and operation of the Project within ½ mile of the site boundary. The site boundary means "the perimeter of the site of a proposed energy facility, it's related or supporting facilities, all temporary laydown and staging areas and all corridors and micrositing corridors proposed by the applicant" (OAR 345-001-0010(55)).

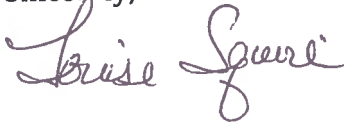
1. The applicant lists the areas which are included in the site boundary in Exhibit F, Page F-2, however, they failed to include noise modeling or include all the receptors within the ½ mile area beyond the entire site perimeter.
2. The applicant failed to do noise modeling for all noise sensitive property as they did not include churches, schools, libraries, or hospitals as is required by the definition in OAR 340-035-0015(38).
3. The applicant also failed to include the noise identified in OAR 340-035-0035(1)(b)(B)(ii) as not being exempt from the ambient statistical noise level indirectly caused by or attributable to that source including all its related activities. This section states, "Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this rule, shall not be excluded from this ambient measurement." The application is not complete prior to the applicant finishing Exhibit X to include all sources required by this rule as



well as all receptors within ½ mile of the entire site boundary. No decisions can be made absent an accurate accounting of the predicted noise impacts which has not occurred.

No Proposed Order can be issued until the developer has shown that they meet the requirements at the time a site certificate is issued. OAR 345-015-0190(5) allows the Department to find the application is complete when the applicant has submitted information adequate for the Council to make findings or impose conditions on all applicable Council standards. While not all information required by OAR 345-021-0000 and 0010 must be submitted, there must be information adequate to show they meet the requirements or will meet them by implementing the conditions contained in the site certificate. The draft site certificate does not assure that the noise standard will not be exceeded, and the developer has not provided noise modeling or included modeling for all required sources of noise to establish the ambient statistical noise level of the development for all NSR's. Missing information includes: 1. Identification of all noise sensitive receptors within ½ mile of the entire site boundary; 2. Identification and notice to the owners of all noise sensitive properties; and 3. Modeling which includes Items (5)(b) - (f), (j), and (k) which cannot be excluded from the ambient noise measurement.

Sincerely,



---

Signature

Printed Name: Louise Squire

Mailing Address: 2105 Oak St  
La Grande, Or  
97850

August 5, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301

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AUG 23 2019

DEPARTMENT OF ENERGY

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

COMMENT REGARDING THE BOARDMAN TO HEMINGWAY TRANSMISSION LINE DRAFT PROPOSED ORDER

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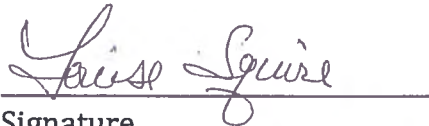
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Sincerely,



Signature

Printed Name: Louise Squire

Mailing Address: 2105 Oak St  
La Grande, OR  
~~97850~~  
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Oregon Energy Facility Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E  
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AUG 23 2019

DEPARTMENT OF ENERGY

Email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project (B2H) 9/28/2018; Draft Proposed Order 5/23/2019.

Dear Chair Beyeler and Members of the Council:

This letter is a public comment for the above referenced project. Specifically, this letter will discuss Idaho Power's compliance with Standard 345-022-0110 - Public Services, in Exhibit U (3.5.6.2 and 3.5.6.5) of the EFSC application for B2H to ODOE. The letter will discuss the impact potential wildfires caused by the B2H transmission line will have on the ability of public and private providers within the analysis area to provide fire protection.

The effect of transmission lines on wildfire impact in western states has been well documented. In California, PG&E lines have caused 5 of the 10 most destructive fires since 2015, producing a liability of over 30 billion for PG&E. When considering the impact of B2H's operation, residents of Union County find the similarities between La Grande and Paradise California, where the infamous Camp Fire struck in 2018, deeply concerning. La Grande and Paradise share similar elevations and populations, however, La Grande has several characteristics that make it significantly more vulnerable to the ravages of wildfire than Paradise. For instance, La Grande averages 18 inches of rain yearly while Paradise enjoys 55 inches. Additionally, the proposed line runs adjacent to La Grande, while the line causing the Camp Fire was 7 miles from Paradise. *Oregon's 2006 Communities at Risk Assessment* by the Oregon Department of Forestry cites a startling fact: **The fire risk of the wildland urban interface (WUI) in La Grande has been rated the #1 WUI fire risk in Oregon!**

There is no doubt that construction of the proposed B2H transmission line would significantly increase the risk of wildfire in our area. From Idaho Power's own Draft Protection Order (Exhibit U-3.5.6.2, p. U-24): "Most activities will occur during summer when the weather is hot and dry. Much of the proposed construction will occur in grassland and shrub-dominated landscapes where the potential for naturally occurring fire is high. Project construction-related activities, including the use of vehicles, chainsaws, and other motorized equipment, will likely increase this potential risk in some areas within the Site Boundary. Fire hazards can also be related to workers smoking, refueling, and operating vehicles and other equipment off roadways. Welding on broken construction equipment could also potentially result in the combustion of native materials near the welding site." Idaho Power recognizes this hazard but makes no consideration of it in its application.

There are several specifics to examine in an analysis of the proposed B2H line's effects on Union County's ability to provide fire protection services. Firstly, firefighting crews in our region are



limited and volunteer. In their application, Idaho Power avers, "Most of the fire districts within the analysis area comprise volunteers, and in some cases, it takes considerable time to collect and mobilize an entire fire crew." As well, JB Brock, Union County emergency Manager states in Idaho Power's application "volunteer fire departments (rural fire protection districts) have a hard time finding volunteers due to budget constraints, similarly to budget constraints at the state and federal level. The wildland fires are getting bigger and cost more to fight" (U-1C-6). Fire crews in Union County are not equipped to handle potential wildfires generated by the proposed B2H transmission line.

The fact that fire crews are unstable, small and volunteer affects many aspects of their ability to respond to wildfires. Delayed response times, as noted in the quote from the previous paragraph, is one effect. Estimates of response time in the EFSC application are best-case scenarios. The estimate of 4 to 8 minutes as the response time in Union County (Table U-10) is far from even a best-case scenario (p. U-17). Residents that live on Morgan Lake Road concur that driving time is at least 10-15 minutes to the most accessible areas of the line from the base of Morgan Lake Road. Add to this estimate travel time from the La Grande Fire Station (approximately 7 minutes) and the time needed for individual fire fighters to travel to the Fire Station for a more realistic best-case scenario response time. The Paradise Camp Fire burned at a rate of over 1 acre per second!

Another factor in transmission line fires particularly impactful for small volunteer fire departments is the complications to firefighting introduced by the transmission lines themselves. According to Marvin Vetter, ODOF's Rangeland Coordinator, "local crews have no training in this scenario and will wait for the lines to be de-energized." JB Brock, Union County Emergency Manager, states, "The project (transmission line) could limit the ability on initial attack if fire fighters have to wait for power lines to be de-energized." (U-1C-6) These delays allow fires to grow even more.

How can communities struggling to maintain volunteer fire crews hope to address the overwhelming additional challenges and risks imposed by a project such as the B2H transmission line? Where is this addressed in Idaho Power's application and how can Idaho Power conclude that the proposed B2H transmission line is "not expected to have significant adverse impacts on fire protections services" (Exhibit U 3.5.6.2)? Considering the current capacities of fire protection services in Union County and the additional risks of wildfire imposed by the B2H transmission line, I urge you to act in accordance with state statute OAR 345-022-0110 and reject Idaho Power's application to construct the Boardman to Hemingway transmission line.

Sincerely,

*Louise Squire*

Name

*Louise Squire*

Address

*2105 Oak St*

*La Grande, Or*

*97850*

# RECEIVED

AUG 22 2019

August 12, 2019

Oregon Energy Facility Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E  
Salem, OR 97301

## DEPARTMENT OF ENERGY

Dear Chair Beyeler and Members of the Council:

Page 62 (T-57) ASC refers to “extensive work in the siting study of the Morgan Lake Alternative.” I doubt it was extensive because it is entirely inaccurate:

Page 145 (T-4-46) Morgan Lake Park is described as 204 acres, containing one lake, which is developed with primitive campsites and fishing docks.

Morgan Lake Park actually contains two lakes. Morgan Lake covers 70 acres; the other, Twin Lake, [also known as Little Morgan Lake] is in plain sight, within 300' of Morgan Lake; it covers 27 acres.

Twin Lake is undeveloped, a wild life and bird sanctuary, home to nesting bald eagles. It is designated as protected wetlands. In their application, Idaho Power conveniently omits any references to Twin Lake.

Page 156, (T-4-6) ASC purports to be a map of Morgan Lake Park. According to the map legend, the purple cross hatch amoeba-shaped area is Morgan Lake Park. That's wrong. The purple cross hatch is Morgan Lake. The actual boundaries of the 204 acre park are not indicated. Obviously, it's difficult to believe “extensive work on this siting study” ever occurred.

*The applicant also used aerial photography to identify and avoid, where practical, irrigation pivots, houses, barns, private runways, other structures (e.g., wind turbines), and land use features. The corridors were adjusted using topographic maps to avoid or minimize distance across very steep slopes and other physical features less desirable for transmission line construction and operation. The corridors were again checked against the constraint and opportunity geographic information system (GIS) database to avoid, where possible, exclusion areas and areas of high permitting difficulty such as potential Oregon Department of Wildlife (ODFW) Category 1 habitats. The applicant then grouped the alternative corridors into 14 regions and evaluated on the basis of permitting difficulty, construction difficulty and mitigation costs. Using the constraint database, which incorporated the eight siting factors, the applicant reviewed the alternatives to determine the most reasonable corridor within each region. (DPO p. 11)*

It is distressing to think that this is only one of many errors in Idaho Power's ASC. If the IPC surveying and engineering staffs are unable to detect a 27 acre lake within a 204 acre park, it's disquieting to imagine the difficulties in identifying and analyzing less obvious and life-threatening situations like fault zones, slide areas and other potential dangers to public safety



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If this slipshod effort is typical of IPC's careful attention to engineering a route, it may also explain IPC's egregious error in choosing to site the B2H on their preferred Mill Creek or alternative Morgan Lake route rather than on the carefully studied and analyzed BLM Environmentally Preferred route.

Following the DEIS, Idaho Power made a hasty and ill-advised effort to avoid litigation threatened by individuals whose remote properties and summer cabins would have been impacted by the line. If Idaho Power had chosen to follow the BLM Environmentally Preferred route, miles to the west of La Grande, rather than in the immediate view of 13,000 La Grande residents, there might have been ten people at the public meetings in La Grande, rather than the hundreds who have consistently appeared to protest various serious problems associated with the routes proposed for the B2H. The haste of this effort is evident in the abundant errors of omission and misinformation typical of the B2H ASC and DPO which will be addressed in a separate comment.

  
Signature

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Address: 2105 Oak St  
La Grande, Or  
97850

Kellen Tardaewether, Senior Siting Analyst

Oregon Department of Energy

550 Capitol St. NE

Salem, Oregon 97301

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AUG 22 2019

DEPARTMENT OF ENERGY

EFSC B2H FAILURE TO INCLUDE IMPACTS OF MODIFICATION OF EXISTING ROADS WITH 0-20% IMPROVEMENT."

Comment Regarding the Following:

When Modifications are made to existing roads, these roads must be included in the site boundary and be controlled by the conditions of the site certificate, or, if not included in the site boundary, must go through the local County or City Land Use Process including public hearings and any other requirements.

Definitions contained in the Oregon Statutes and EFSC Rules clearly define the area which is controlled by the site certificate.

1. The "site" is defined in ORS 469.300 as "any proposed location of an energy facility and related or supporting facilities."
2. ORS 469.300 also defines "Related or supporting facilities" as "means any structure, proposed by the applicant, to be constructed or substantially modified in connection with the construction of an energy facility, including associated transmission lines, reservoirs, storage facilities, intake structures, road and rail access.-----"

The court case listed on Page K-12 footnote which is cited to support the determination that there is "no substantial modification" by looking at the percentage of modification along an entire road segment does not speak to this issue. There is no definition of what constitutes an "entire road segment", and substantial modification may occur, and will occur at different locations along the roads when widening or resurfacing is required in order to accommodate equipment and supplies being transported onto or off the transmission line construction area. The appeals court decision is attached to document the failure of this document to provide the definition that the application appears to credit to it.

3. A site certificate by definition contained in ORS 469.300(26) means "the binding agreement between the State of Oregon and the applicant, authorizing the applicant to construct and operate a facility on an approved site, incorporating all conditions imposed by the council on the applicant."

The issue of control of modifications to existing roads outside the site boundary are also defined in the following definitions contained in OAR 345-001-0010 including:

4. (54) "'Site" as defined in ORS 469.300. "Energy facility site" means all land upon which an energy facility is located or proposed to be located. "Related or supporting



facilities site" means all land upon which related or supporting facilities for an energy facility are located or proposed to be located.

5. (55) ""Site boundary" means the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas and all corridors and microsites corridors proposed by the applicant."

6. (56) ""Site certificate" as defined in ORS 469.300."

The above definitions, particularly the definition of "site certificate" in the statute clearly limit the extent of the Oregon Department of Energy and Energy Facility Siting Council evaluation and control to activities occurring on the "site" as defined in the above rules and statute. Any modifications to road segments which are not included in the site boundary are outside the jurisdiction of the Energy Facility Siting Council. Modifications to these road segments must go through the Planning Department Processes utilized in each county including the zoning, public hearing and any other local land use requirements specific to each county, or be included in the site boundary and be required to "incorporate all conditions imposed by the council on the applicant."

Louise Squire  
Louise Squire  
2105 Oak St  
La Grande, Or  
97850

August 2, 2019

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301  
email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

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AUG 23 2019

DEPARTMENT OF ENERGY

THE APPLICANT SIGNIFICANTLY UNDERSTATES THE IMPACTS TO EMPLOYMENT AND FOREST LANDS AS A RESULT OF THE PROPOSED B2H TRANSMISSION LINE

Exhibit K, Attachment K-2, Pages 19 and 20, Section 7.0

The applicant claims that removal of forestland by clearing of trees for a period of over 50 years will have little economic impact to forest sector jobs in Umatilla and Union County. They value the loss of 245.6 acres of forestland in Umatilla County at \$488.60 per acre. However, they value the removal of 530.1 acres lost to the transmission line in Union County at \$182.98 per acre. The applicant provides no justification or documentation to support the difference in value per acre between Umatilla and Union Counties.

Some forest facts related to this section:

According to US Forest Service Tech. Rept. PNW-GTR-578 Rev. 2004 entitled "Forests of Eastern Oregon: an Overview", Eastern Oregon Forests produce an average of 20 cubic feet per acre of timber each year. That would mean that an acre of land would produce approximately 240 board feet of lumber per year per acre during the life of the transmission line. According to Scott Hartell, Planning Director, Union County, forest land in Union County is classified as either 20 cubic feet per acre per year, or 50 cubic feet per acre per year, so the value amounts could be significantly higher. The "Forest Facts Oregon's Forests: Some Facts and Figures" published in 2009 by the Oregon Department of Forestry states that economists estimate that for every billion board feet that is harvested in Oregon 11 forest sector jobs are created or retained.

Idaho Power's stated timber values are unrealistically low according to individuals owning forest land in both counties. No one would be using land for trees which precludes other uses if the economic benefits were as the developer is stating.

The applicant's identification of the acres of forest land impacted is incorrect due not only to the failure to use soil types to identify forest lands, but also, the fact that they are requesting a 300 foot right of way and they need to include the value of any additional trees they will be removing in the 100 foot area on each side of the right of way.

The applicant claims that the value of the land in the right of way will not be significantly reduced due to the owner's opportunity to use the land for agricultural or range land after the transmission line is constructed. This is completely unfounded. The lineal nature of a transmission line precludes any productive use of land taken for the transmission line. The right of way is too narrow to make it available for production of crops, and the costs associated with purchasing equipment for agricultural operations would be prohibitive.

It would be unusual for a forest operator to already own equipment for a crop operation. In order to use the right of way as grazing land, it would have to be fenced. According to "Estimated Livestock Fencing Costs for the Small-Farm Owner" by Derek L. Barber, the average cost of materials for ¼ mile (1,320 ft.)



of field fence is \$1,108.53 plus the cost of building it. The Iowa State University Extension identified 2011 costs for constructing ¼ mile of fencing to be \$1,947.75 installed. Enclosing a square acre requires 820 feet of fence. In other words, the cost of fencing an acre of lost forest land would exceed the value the applicant claims the land would add to the local economy per acre for the 50 years the transmission line is predicted to be in place.

The applicant also claims that the transmission line right of way through forest lands will not cause a substantial change in accepted forest practices or cause a significant increase in the cost of accepted forest practices on lands to be directly impacted by the Project or on surrounding lands. Removing trees from land currently being used to grow them certainly will create a substantial change in accepted forest practices. It also will substantially increase the costs of growing and harvesting trees on the surrounding lands. Soil compacted by heavy equipment used to access the line will discourage regrowth.

The transmission line will make it impossible to use aerial equipment to harvest trees on steep hillsides adjacent to the line; it will increase costs of harvest due to the need to avoid equipment contact with the transmission lines, avoid trees falling on the transmission lines, require new access and egress from the forested lands that avoid having log trucks and equipment moving below the transmission line, It will decrease the harvest along the transmission line due to tree loss along the corridor from wind and weather conditions impacting weakened root infrastructure once the transmission corridor is cleared.

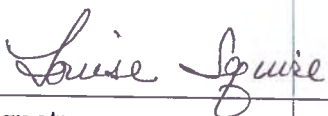
Removing forested land along the transmission line will result in nearly a total loss of the economic value of the land removed from production of trees, and will impact the landowners and county economy not only by the loss of the production of trees and taxes, fees, employment and other benefits coming from that activity, but there will be related losses to the productivity of adjacent land, increased costs of harvesting along the transmission line, introduction of noxious weeds, increased risk of wildfire, potential increase in the number of trespassers, interference with wildlife activities including displacement of wildlife to what may be less desirable habitat, opening the area up to increased predation on the multiple non-raptor species utilizing the forested areas, decreased value of land if it is sold, long-term reduction in assessed value of the land, etc. The conclusions stated by the applicant in section 8.0 are false, absolutely without merit.

In addition, the applicant has failed to provide documentation to support their conclusions. The only reference the applicant cites that relates at all to this issue is the publication from the Oregon Forest Resources Institute.

In summary:

The applicant has failed to document that they will comply with Land Use Goal 4 OAR 660-006-000 through OAR 660-006-0010; There is no documentation provided that would indicate they are in compliance with OAR 345-022-0030 and they have not documented, nor are they able to meet the requirement contained in OAR 345-022-0030(4) to allow an exception.

Therefore, the Council should DENY the application for site certificate.

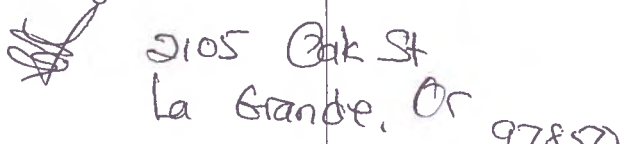


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DEPARTMENT OF ENERGY

Regarding: THERE WILL BE AN INCREASED RISK OF WILD FIRES AND THERE IS A LACK OF LOCAL RESOURCES TO RESPOND IN A TIMELY AND EFFECTIVE MANNER.

The Boardman to Hemingway transmission line will increase the potential and severity of wildfires due to opening up additional access for people, lightning strikes, remoteness of much of the line, the fact that high voltage transmission lines increase the height and heat of fires along the transmission lines, and limitations on local human and equipment resources to fight wildfires in remote locations.

Both Union County and Baker County have submitted comments regarding the fact that they do not have the manpower or specialized equipment necessary to fight fires in the new remote areas which will have an increased risk of catastrophic fires. Part of the area which will be crossed by the transmission line has no designated fire protection other than the Oregon Forest service. Areas where the Rural Fire Protection District is the designated fire department, there is no protection for wildfires. Because the RFPD's are only trained to fight structural fires..'

Given the timeframes for contacting and assembling volunteers, and the long travel times to respond to multiple areas along the transmission line, fires will have an opportunity to grow significantly prior to any fire response being able to access the area. Reports from volunteers called on to fight a fire which occurred during the construction of the Elkhorn Wind development stated they had difficulty accessing the area, the terrain was steep, and there were multiple rattlesnakes in the area which made the job of fighting the fire very difficult...

Both Union and Baker Counties have submitted written comments to the Oregon Department of Energy stating they would need additional manpower and equipment if they are to be in a position of being able to effectively protect the citizens and resources from potential wildfires resulting from the development of the transmission line.

This is a serious issue due to the fact that the developer has indicated their intent to rely upon local resources in the event a fire occurs along the transmission line.

Following is the risk assessment for Oregon cities of high risk for wildfires.

**Condensed Version of  
Oregon's 2006 *Communities At Risk* Assessment  
Identification of High Risk CARs Only**

**Background**

Oregon natural resource agencies, fire service professionals, and communities facing the threat of wildfires recognize the need for risk assessment. Many local communities and counties throughout Oregon have developed local risk assessments using a variety of methods. A statewide task force was formed in February 2004 as part of the Oregon Department of Forestry's Fire Program Review to



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develop a statewide assessment of *Communities At Risk*. This supports fulfillment of the Memorandum of Understanding (MOU) between the National Association of State Foresters (NASF) and federal agencies as well as Task E in Goal 4 of the *Implementation Plan for the 10-Year Comprehensive Strategy*. The task force brought together a number of stakeholder organizations outside of those involved in the MOU. The statewide *Communities At Risk* assessment also provides guidance for communities in the process of developing or updating local risk assessments to align with the state methodology.

### Results

Five hundred sixty-four (564) *Communities At Risk* in Oregon were identified and assessed for their relative risk to wildfire. *Community At Risk* is a "geographic area within and surrounding permanent dwellings with basic infrastructure and services, under a common fire protection jurisdiction, government, or tribal trust or allotment, for which there is a significant threat due to wildfire." They were identified by determining where permanent dwellings with basic infrastructure and services exist at the density required by federal legislation; a community name was assigned to these populated areas based upon a common fire protection jurisdiction, government, or tribal trust or allotment; then a geographic area surrounding these populated jurisdictions was identified is to be considered part of the community based upon a fire shed concept.

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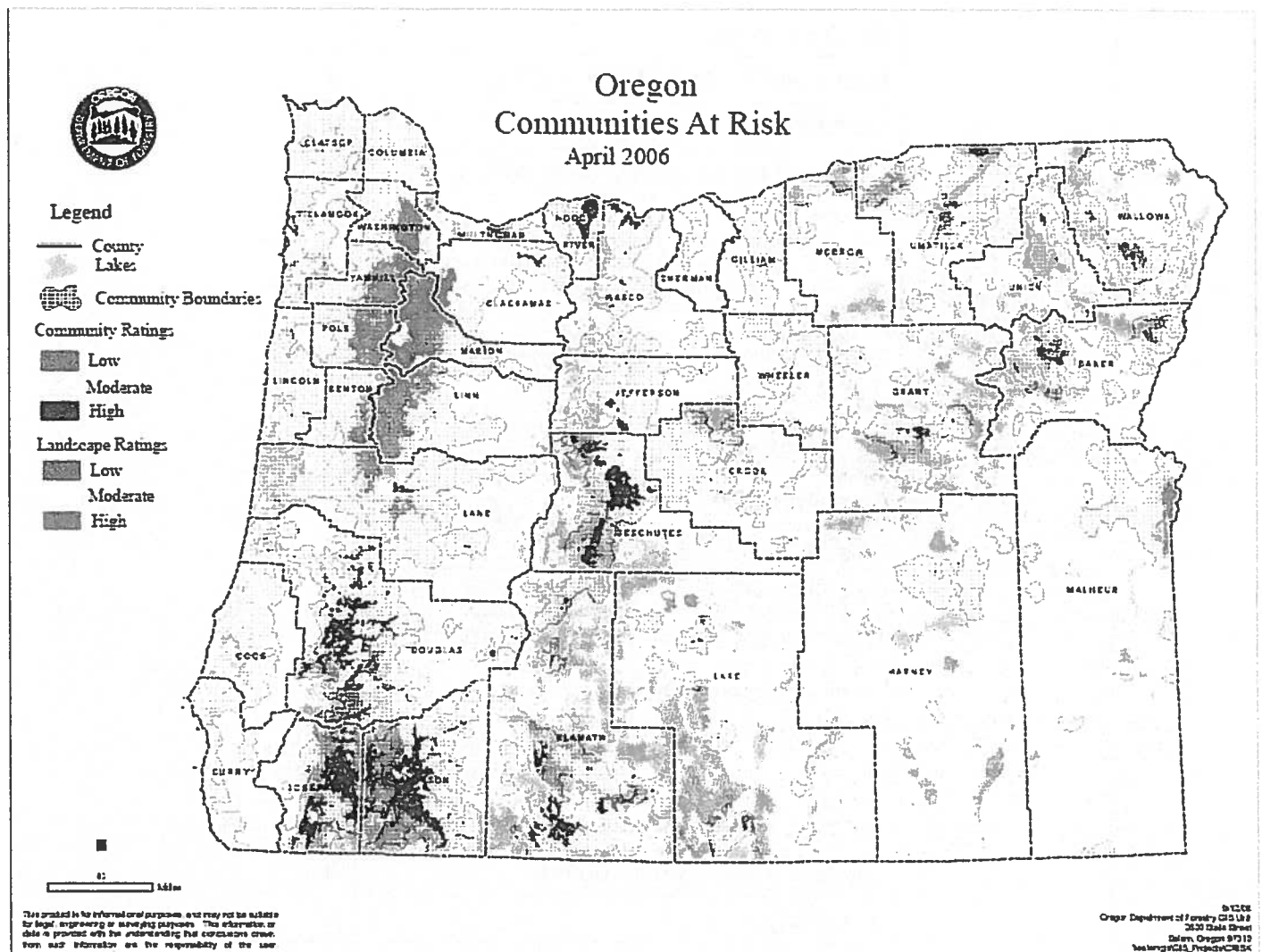


Figure 1. Community At Risk overall assessment

### Listing of Communities At Risk and Rating

BAKER	BAKER (County)	H
	Baker City (City)	H
	BAKER RFPD (RFPD)	H
	HAINES FIRE PROTECTION DIST. (RFPD)	H
	Halfway (City)	H
	PINE VALLEY RFPD (RFPD)	H
	Sumpter (City)	H
CROOK	CROOK (County)	H
DESCHUTES	Bend (City)	H



	BEND FD (RFPD)	H
	BLACK BUTTE RANCH RFPD (RFPD)	H
	CLOVERDALE RFPD (RFPD)	H
	CROOKED RIVER RANCH RFPD (RFPD)	H
	DESCHUTES (County)	H
	LAPINE RFPD (RFPD)	H
	Sisters (City)	H
	SISTERS-CAMP SHERMAN RFPD (RFPD)	H
	Sunriver (RFPD)	H
DOUGLAS	AZALEA VOLS (RFPD)	H
	Calapooya (RFPD)	H
	CAMAS VALLEY VOL RFD (RFPD)	H
	Canyonville (City)	H
	CANYONVILLE SOUTH UMPQUA FD (RFPD)	H
	Cow Creek (Reservation)	H
	DAYS CREEK RFD (RFPD)	H
	DOUGLAS (County)	H
	DOUGLAS CO FIRE DIST #2 (RFPD)	H
	Douglas CO Fire District #5 (RFPD)	H
	Drain (City)	H
	DRAIN RFPD (RFPD)	H
	FAIR OAKS RFPD (RFPD)	H
	Glendale (City)	H
	GLENDALE RFPD (RFPD)	H
	GLIDE RFPD (RFPD)	H
	LOOKINGGLASS RFD (RFPD)	H
	MILO RFPD (RFPD)	H
	Myrtle Creek (City)	H
	MYRTLE CREEK FD (RFPD)	H
	Oakland (City)	H
	OAKLAND RFPD (RFPD)	H
	RICE HILL RFD (RFPD)	H

	Riddle (City)	H
	Riddle RFPD (RFPD)	H
	Roseburg (City)	H
	Sutherlin (City)	H
	TENMILE RFPD (RFPD)	H
	TILLER RFPD (RFPD)	H
	TRI CITY FIRE DIST #4 (DOUG) (RFPD)	H
	Winston (City)	H
	Yoncalla (City)	H
	YONCALLA RFPD (RFPD)	H
GRANT	Canyon City (City)	H
	Granite (City)	H
	GRANT (County)	H
	John Day (City)	H
	JOHN DAY FIRE DEPT (RFPD)	H
	Long Creek (City)	H
	MT VERNON FD (RFPD)	H
	Mt. Vernon (City)	H
	Prairie City (City)	H
	PRAIRIE CITY FIRE DEPT (RFPD)	H
	Seneca (City)	H
HOOD RIVER	Cascade Locks (City)	H
	DEE RFPD (RFPD)	H
	Hood River (City)	H
	HOOD RIVER (County)	H
	ODELL RFPD (RFPD)	H
	PARKDALE RFPD (RFPD)	H
	PINE GROVE RFPD (RFPD)	H
	WEST SIDE RFPD (RFPD)	H
JACKSON	APPLEGATE RFPD #9 (RFPD)	H
	Ashland (City)	H
	Butte Falls (City)	H
	Central Point (City)	H



	COLESTIN RFPD (RFPD)	H
	Eagle Point (City)	H
	EVANS VALLEY FIRE DIST #6 (RFPD)	H
	Gold Hill (City)	H
	JACKSON (County)	H
	JACKSON CO FD #3 (RFPD)	H
	JACKSON CO RFPD #4 (RFPD)	H
	JACKSON CO RFPD #5 (RFPD)	H
	Jacksonville (City)	H
	LAKE CREEK RFPD #8 (RFPD)	H
	Medford (City)	H
	MEDFORD F&R (RFPD)	H
	Phoenix (City)	H
	PROSPECT RFPD (RFPD)	H
	Rogue River (City)	H
	ROGUE RIVER RFPD (RFPD)	H
	Shady Cove (City)	H
	Talent (City)	H
JEFFERSON	Camp Sherman (RFPD)	H
	JEFFERSON (County)	H
	Warm Springs (Reservation)	H
	WARM SPRINGS FIRE SFTY (RFPD)	H
JOSEPHINE	APPLEGATE RFPD #9 (RFPD)	H
	Cave Junction (City)	H
	Grants Pass (City)	H
	ILLINOIS VALLEY RFPD (RFPD)	H
	JOSEPHINE (County)	H
	Oregon Caves NM (NPS)	H
	RURAL METRO FIRE DEPT (RFPD)	H
	WILLIAMS RFPD (RFPD)	H
	WOLF CREEK RFPD (RFPD)	H
KLAMATH	BLY RFPD (RFPD)	H
	CHEMULT RFPD (RFPD)	H

	Chiloquin (City)	H
	CHILOQUIN-AGENCY LK RFPD (RFPD)	H
	CRESCENT RFPD (RFPD)	H
	HARRIMAN RFPD (RFPD)	H
	KENO RFPD (RFPD)	H
	KLAMATH (County)	H
	Klamath (Reservation)	H
	KLAMATH CO FD #3 (RFPD)	H
	KLAMATH CO FD #5 (RFPD)	H
	KLAMATH CO FIRE DIST #1 (RFPD)	H
	Klamath Falls (City)	H
LAKE	LAKE (County)	H
	Lakeview (City)	H
	LAKEVIEW FIRE DEPT (RFPD)	H
	NEW PINE CREEK RFPD (RFPD)	H
	Paisley (City)	H
	THOMAS CREEK/WESTSIDE RFPD (RFPD)	H
LANE	Blue River WD (RFPD)	H
	Hazeldell Rural Fire District (RFPD)	H
	Oakridge (City)	H
	Upper McKenzie RFPD (RFPD)	H
MALHEUR	Vale (City)	H
MARION	Detroit (City)	H
UMATILLA	EAST UMATILLA CO RFPD (RFPD)	H
	Ukiah (City)	H
	UMATILLA (County)	H
	Umatilla (Reservation)	H
UNION	Cove (City)	H
	COVE RFPD (RFPD)	H
	Elgin (City)	H
	ELGIN VOL FIRE DEPT (RFPD)	H
	HAINES FIRE PROTECTION DIST. (RFPD)	H
	IMBLER RFPD (RFPD)	H



	La Grande (City)	H
	UNION (County)	H
WALLOWA	Enterprise (City)	H
	Lostine (City)	H
	Wallowa (City)	H
	WALLOWA (County)	H
	WALLOWA FD (RFPD)	H
WASCO	JUNIPER FLATS RFPD (RFPD)	H
	MID-COLUMBIA F&R (RFPD)	H
	Mosier (City)	H
	MOSIER FD (RFPD)	H
	PINE GROVE RFPD (RFPD)	H
	PINE HOLLOW VOL (RFPD)	H
	Wamic (RFPD)	H
	Warm Springs (Reservation)	H
	WASCO (County)	H
WHEELER	FOSSIL VOL FD (RFPD)	H
	Mitchell (City)	H
	WHEELER POINT VOL FIRE ASSOC (RFPD)	H

Kellen Tardaewether  
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AUG 22 2013

DEPARTMENT OF ENERGY

Dear Ms. Tardaewether:

**NOXIOUS WEED COMMENTS**

The draft Noxious Weed Management Plan Section B2 of Application does not meet the requirements of the following Administrative Rules which must be addressed prior to the issuance of a Site Certificate for the Boardman to Hemingway Transmission line. The plan must comply with OAR 345-022-0060, Habitat Standard, requiring that the plan not result in infestations of noxious weeds and resulting damage to wildlife habitat; OAR 345-22-0070, Threatened and Endangered Species, requiring the protection of Threatened and Endangered species including the potential for habitat degradation resulting in species reduction, OAR 345-22-0110, Public Services due to the impact of local weed control services being required to address unmanaged infestations of noxious weeds, OAR 345-22-0030, Land Use due to impacts of invasive weeds on all private lands including those designated as farm and/or forest use which would significantly impact farm income and adjacent farm and forest property.

Union County submitted 31 notes and changes required of the Noxious Weed Plan on August 22, 2017. It was as a result of a meeting between the Morrow, Umatilla and Union County weed supervisors and incorporated previous concern of Malheur and Baker county weed supervisors. These comments are submitted due to the need to address each of the changes required to the Noxious Weed Plan.

Following are issues taken from the draft Weed Management Plan which need to be corrected to comply with Oregon state law and/or EFSC rules:

**Page B2-2**

Idaho Power claims to be only responsible for weeds within Right of Way and up to 50 feet from right of way in Malheur County. IPC claims no responsibility for weeds outside the ROW or those present before the project. Absent 100% assurance that no noxious weeds at the site of the development will be allowed to go to seed, the weeds at the site will disperse to areas outside the ROW.

Idaho Power Management Plan: (B2-13) Problematic statements which are not consistent with the statutes and rules requiring control of noxious weeds.

- Pre construction weed surveys only planned for areas to be disturbed during construction. (Weed surveys also need to occur for areas adjacent to the development as well as control sites to determine if more weed infestations are occurring at locations impacted by the development.)
- Surveys will be completed by the Construction Contractors. (Surveys need to be completed by a third party not impacted by the results.)
- Will document existing infestation of noxious weeds adjacent to the project and adjacent uses that could contribute to proliferation of noxious weeds. (B2-14). (Plan to use this information to avoid responsibility for addressing infestations of these noxious weeds within the ROW in spite of the fact that disrupting habitat will increase the likelihood of infestations which may otherwise not occur. The information needs to be used to determine current conditions



and establish whether or not the development has resulted in increased numbers or types of noxious weeds present.)

- IPC claims they are only responsible for controlling new noxious weed populations that are demonstrated to be the result of project construction, operation or maintenance. (i.e. new infestation in an area disturbed by project activities that cannot be attributed to adjacent existing infestations or introduction by a source outside the control of IPC) (Ignores the fact that disruption of the habitat is a major factor in new infestations).
- IPC will not be responsible for control of pre-existing noxious weed populations outside the Project ROW. IPC will not be responsible for noxious weeds introduced by activities other than Project Construction and O&M (eg. Recreational use, grazing, other construction projects, etc) or natural occurrences (eg. Fire, or noxious weeds outside the ROW or any existing access roads not improved by the Project).

(Development, improvement of, and use of roads for access to the area will promote the introduction of and increased occurrence of noxious weed infestations. The development will damage native habitat and will result in ongoing equipment use of the area in the ROW will result in increased weed infestations and the transport of weed varieties from other areas. Habitat impacts for the life of the project will result in opportunities for invasive weed infestations. The developer is responsible for these impacts unless they can document that the impacts of the development were not the cause or a contributing cause of the infestation.

- (B2-15) The developer plans to have vehicle movement outside the right-of-way in predesignated access, contractor-acquired access, public roads, overland travel routes, or crossings to streams approved by applicable land-management agency or landowner. (The developer is responsible for noxious weed control in any areas where new roads are developed, existing roads are modified by the developer, overland travel routes, including streams crossed. There appears to be a presumption that overland travel outside designated corridors does not contribute to noxious weed spread. This is categorically incorrect.)

\* (B2-20) Noxious weed control efforts will be conducted for 3 to 5 years following construction. Would extend beyond 3-5 years if: disturbed areas are not meeting preconstruction conditions and adjacent land uses are not deemed to be the primary cause of the introduction and/or persistence of noxious weed species within areas disturbed by the Project and/or maintenance activities have caused or contributed to the spread or establishment of noxious weeds.

(Disturbed habitat is a primary causal factor of invasive weed infestations. Adjacent land uses will not be a primary causal factor. No matter what the results of the initial years of noxious weed control efforts, the control efforts need to continue for the life of the project. Ongoing maintenance of the transmission line, the use of vehicles in the ROW, access to the area provided by the ROW, etc. will mean that the development will increase the likelihood of invasive weed infestations for the life of the project.)

- (B2-21) IPC will conduct ongoing monitoring and focused control of noxious weed infestations inside of the ROW, as needed, for the life of the BLM ROW and the USFS special-use authorization. (Planning to do this monitoring and control for the life of the project only for areas on BLM or USFS lands)

## SOME OF THE PROBLEMS

1. Ongoing monitoring for the life of the project only is done on BLM and USFS

land, not private land or state land.

B2-21

2. The construction contractor will develop the final weed management plan and do the surveys. The draft plan included in the application documents that the developer does not intend to comply with state law or administrative rules as noted in the detailed comments received from me and others concerned with this issue. The plan should be developed by a third party contractor not directly impacted by it's requirements.
3. Monitoring of private property does not continue for the life of the project.
4. IPC not taking responsibility for infestations occurring from adjacent lands even though they have disturbed the habitat increasing the opportunities for infestations.
5. IPC not taking responsibility for any infestations which result from increased access to area due to ROW allowing recreational vehicles to access area.
6. IPC not planning monitoring and treatment timeframes that will preclude the dispersal of seeds from the area.
7. IPC is not taking responsibility for weeds dispersed from the transmission line to the adjoining property.
8. IPC providing no control plots to determine if the existence of the transmission line ROW results in more noxious weeds in adjacent private property.

#### State Statutes and rules:

ORS 569.390 requires the owner or occupant of land containing noxious weeds is responsible for assuring that no noxious weed are permitted to produce seed.

ORS 569.390 states that no machinery shall be moved over any public road without first thoroughly cleaning it.

OAR 345-025-0016 states "In the site certificate, the Council shall include conditions that address monitoring and mitigation to assure compliance with the standards contained in OAR Chapter 35, Division 22 and Division 24.

EFSC does not have the authority to overrule state statutes relating to noxious weed management.

#### Federal Issues:

Executive Order 13112 (1999) requires Prevent introduction of such species, detect and control such species, monitor population of such species, not authorize, fund, or carry out actions likely to cause the introduction or spread of invasive species in the United States or elsewhere unless the benefits of the action clearly outweigh the harm and the agencies take steps to minimize the harm.

#### US Department of Agriculture, Forest Service

Invasive species management activities on National Forest System lands shall be conducted according to the following objectives: prevention, early detection and rapid response, control and management, restoration.

BLM Manual 9015 (BLM 1992) BLM must manage noxious weeds and undesirable plants on BLM lands by preventing establishment and spread of new infestations, reducing existing population levels and managing and controlling existing stands.


The above information provides adequate documentation of the problems with increased noxious weed impacts to wildlife habitat, adjacent farm and forest lands, etc. The applicant has not provided a management plan that provides adequate monitoring, management and treatment of the area of impacts of noxious weeds due to the development.



The attached article from the Iowa City Noxious Weed Commissioner provides the cost of failure to address this issue in dollars, loss of biological diversity and land lost to weeds.

Please require the developer to correct the Weed Management Plan to incorporate my concerns as well as those identified by the Counties. These changes are necessary to comply with requirements of Oregon Statutes as well as the Administrative Rules of EFSC and other state agencies who are charged with addressing Noxious Weeds.

Sincerely,

  
Louise Squire  
2105 Oak St  
La Grande, Or  
97850

August 2, 2019

RECEIVED

AUG 22 2019

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301  
email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

DEPARTMENT OF ENERGY

THE APPLICANT SIGNIFICANTLY UNDERSTATES THE IMPACTS TO EMPLOYMENT AND FOREST LANDS  
AS A RESULT OF THE PROPOSED B2H TRANSMISSION LINE

Exhibit K, Attachment K-2, Pages 19 and 20, Section 7.0

The applicant claims that removal of forestland by clearing of trees for a period of over 50 years will have little economic impact to forest sector jobs in Umatilla and Union County. They value the loss of 245.6 acres of forestland in Umatilla County at \$488.60 per acre. However, they value the removal of 530.1 acres lost to the transmission line in Union County at \$182.98 per acre. The applicant provides no justification or documentation to support the difference in value per acre between Umatilla and Union Counties.

Some forest facts related to this section:

According to US Forest Service Tech. Rept. PNW-GTR-578 Rev. 2004 entitled "Forests of Eastern Oregon: an Overview", Eastern Oregon Forests produce an average of 20 cubic feet per acre of timber each year. That would mean that an acre of land would produce approximately 240 board feet of lumber per year per acre during the life of the transmission line. According to Scott Hartell, Planning Director, Union County, forest land in Union County is classified as either 20 cubic feet per acre per year, or 50 cubic feet per acre per year, so the value amounts could be significantly higher. The "Forest Facts Oregon's Forests: Some Facts and Figures" published in 2009 by the Oregon Department of Forestry states that economists estimate that for every billion board feet that is harvested in Oregon 11 forest sector jobs are created or retained.

Idaho Power's stated timber values are unrealistically low according to individuals owning forest land in both counties. No one would be using land for trees which precludes other uses if the economic benefits were as the developer is stating.

The applicant's identification of the acres of forest land impacted is incorrect due not only to the failure to use soil types to identify forest lands, but also, the fact that they are requesting a 300 foot right of way and they need to include the value of any additional trees they will be removing in the 100 foot area on each side of the right of way.

The applicant claims that the value of the land in the right of way will not be significantly reduced due to the owner's opportunity to use the land for agricultural or range land after the transmission line is constructed. This is completely unfounded. The lineal nature of a transmission line precludes any productive use of land taken for the transmission line. The right of way is too narrow to make it available for production of crops, and the costs associated with purchasing equipment for agricultural operations would be prohibitive.

It would be unusual for a forest operator to already own equipment for a crop operation. In order to use the right of way as grazing land, it would have to be fenced. According to "Estimated Livestock Fencing Costs for the Small-Farm Owner" by Derek L. Barber, the average cost of materials for ¼ mile (1,320 ft.)



of field fence is \$1,108.53 plus the cost of building it. The Iowa State University Extension identified 2011 costs for constructing ¼ mile of fencing to be \$1,947.75 installed. Enclosing a square acre requires 820 feet of fence. In other words, the cost of fencing an acre of lost forest land would exceed the value the applicant claims the land would add to the local economy per acre for the 50 years the transmission line is predicted to be in place.

The applicant also claims that the transmission line right of way through forest lands will not cause a substantial change in accepted forest practices or cause a significant increase in the cost of accepted forest practices on lands to be directly impacted by the Project or on surrounding lands. Removing trees from land currently being used to grow them certainly will create a substantial change in accepted forest practices. It also will substantially increase the costs of growing and harvesting trees on the surrounding lands. Soil compacted by heavy equipment used to access the line will discourage regrowth.

The transmission line will make it impossible to use aerial equipment to harvest trees on steep hillsides adjacent to the line; it will increase costs of harvest due to the need to avoid equipment contact with the transmission lines, avoid trees falling on the transmission lines, require new access and egress from the forested lands that avoid having log trucks and equipment moving below the transmission line. It will decrease the harvest along the transmission line due to tree loss along the corridor from wind and weather conditions impacting weakened root infrastructure once the transmission corridor is cleared.

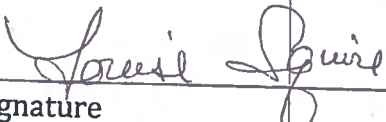
Removing forested land along the transmission line will result in nearly a total loss of the economic value of the land removed from production of trees, and will impact the landowners and county economy not only by the loss of the production of trees and taxes, fees, employment and other benefits coming from that activity, but there will be related losses to the productivity of adjacent land, increased costs of harvesting along the transmission line, introduction of noxious weeds, increased risk of wildfire, potential increase in the number of trespassers, interference with wildlife activities including displacement of wildlife to what may be less desirable habitat, opening the area up to increased predation on the multiple non-raptor species utilizing the forested areas, decreased value of land if it is sold, long-term reduction in assessed value of the land, etc. The conclusions stated by the applicant in section 8.0 are false, absolutely without merit.

In addition, the applicant has failed to provide documentation to support their conclusions. The only reference the applicant cites that relates at all to this issue is the publication from the Oregon Forest Resources Institute.

In summary:

The applicant has failed to document that they will comply with Land Use Goal 4 OAR 660-006-000 through OAR 660-006-0010; There is no documentation provided that would indicate they are in compliance with OAR 345-022-0030 and they have not documented, nor are they able to meet the requirement contained in OAR 345-022-0030(4) to allow an exception.

Therefore, the Council should DENY the application for site certificate.

  
Signature

Louise Squire  
Printed Name

Mailing Address:

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AUG 22 2019

Department of Energy

Dragon Energy Facility Siting Council  
c/o K. Tardae wepka, Analyst  
Dragon Dept. of Energy  
558 Capitol St. NE  
Salem, OR 97301

PORTLAND, OR 972  
17 AUG 2019 PM 4 L



## ESTERSON Sarah \* ODOE

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**From:** Louise Squire <squirrel@eoni.com>  
**Sent:** Thursday, August 22, 2019 2:22 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** B2H DPO comment, Sage-grouse  
**Attachments:** Sage grouse letter (Recovered).docx

Date: August 21, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst Oregon Department of Energy  
550 Capitol St N.E.  
Salem, OR 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018;  
Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

Topic of my comment: Greater Sage-grouse

The future of Greater Sage-Grouse survival is unknown at this time for a number of reasons. Clearly things have changed since the filing of the application which already makes the biological surveys conducted and the mitigation plans outdated. Also it is likely that the Greater Sage-Grouse Comprehensive Conservation Strategy, 2006, ODFW's OAR 635-415-0025(7) and OAR 635-140-0000 to 0025, will be revised.

Climate change and planetary warming are driving rapid environmental change and destabilizing eco-systems creating additional enormous strains and stressors on the habitat of the greater sage-grouse. (Haak, conservation-portfolio-04172019.pdf) IPC's B2H transmission line construction and maintenance, with its 250' wide clear cut of sage brush under the line, will add additional threats to their survival. As noted in the DPO, page 314, lines 4-9: The proposed facility would include the following facility components within sage-grouse core area habitat: 20.77-line miles of transmission line; 12.85 miles of new access roads; and 12.34 miles of substantially modified existing roads. Habitat fragmentation and loss is a big concern for the overall survival of the species (Haak, conservation-portfolio-04172019.pdf). The Baker and Cow Creek PACs (Priority Areas of Concern), in particular, face extirpation (extinction) as this project creates another nail in their coffin.

There are additional threats to sage-grouse, a threatened species, from the B2H project.

1. Transmission lines and transmission towers cause sage-grouse mortality via bird collisions with the lines and facilitate raptor predation of sage-grouse ( Wisdom et al. Sage-Grouse SAB Monograph 18.pdf Page 17).

- 2.The 250' clearance of vegetation under the transmission lines will create loss of habitat and the introduction of invasive weeds. Building new roads and substantially modifying existing roads exacerbates the spread of cheat grass. Cheat grass is taking over sage brush habitat which in turns threatens the sage-grouse because the sage-grouse needs large healthy expanses of sage brush to survive. Cheat grass also dries out early in the season and is thus more fire prone, also endangering the sage-grouse. (Haak, conservation-portfolio-04172019.pdf page 7)



3. The main direct threat to sage-grouse from transmission lines is the tendency of sage-grouse to avoid tall, and especially tall linear, structures -- they recognize these are potential locations of predators. (<https://pubs.usgs.gov/of/2014/1239/pdf/ofr2014-1239.pdf>, pg 8-9) The application, and the DPO, do not adequately account for the likely avoidance effects.

4. In its annual monitoring report in 2018, the ODFW concluded that sage-grouse populations throughout Oregon continue to decline ([https://www.dfw.state.or.us/wildlife/sagegrouse/docs/ODFW\\_2018\\_Sage-Grouse\\_Population\\_Report.pdf](https://www.dfw.state.or.us/wildlife/sagegrouse/docs/ODFW_2018_Sage-Grouse_Population_Report.pdf) at p. 1, hereinafter "ODFW 2018"). The state agency estimated that the 2018 spring population in Oregon was 18,421 individuals. This was a 10% decline from 2017 (population estimated at 20,510 birds), following a 7.7% decline from 2016. The 2018 population had now dropped to 37% below the 2003 baseline population estimate of 29,237 individuals (ODFW 2018). We expect ODFW to announce ever more severe declines in its 2019 report later this year. Other states have reported similar declines.[1] The Baker PAC, which will be affected by the B2H transmission line, has seen its population drop by 75.4% between 2003 and 2018, with a 10.9% decline from 2017 to 2018 alone. (ODFW 2018 at 32, 5).

The Draft Proposed Order and the application do not adequately address the enhanced danger that the B2H transmission line poses in light of the rapidly-decreasing populations. Neither the application nor the DPO actually cite the number of birds that will be affected, nor do they indicate that the sage-grouse populations in Oregon generally, and the Baker and Cow Valley PACs that will be affected by the B2H transmission line, are in serious and significant decline -- and that the addition of a significant habitat disruptor such as a linear transmission line could mark the death knell for these populations. Approval of a site certificate without considering the actual numbers of birds affected and the plummeting populations would be unlawful.

Sincerely,

Louise Squire

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97850

[squirel@eoni.com](mailto:squirel@eoni.com)

[1] See, e.g., IdahoNews, Idaho male sage-grouse counts decline 25% in one year, available at <https://idahonews.com/news/local/idaho-male-sage-grouse-counts-decline-25-in-one-year> (last visited Aug. 1, 2019) (Idaho Fish & Game reporting 25% decline in male sage-grouse since 2018); Angus M. Thuermer Jr., WyoFile, Greater sage grouse counts show 3-year downward trend, available at <https://www.wyofile.com/greater-sage-grouse-counts-show-3-year-downward-trend/> (last visited Aug. 6, 2019); Wyo. Game & Fish Dep't, Sage grouse counts likely to decline in coming year, available at <https://wgfd.wyo.gov/News/Sage-grouse-chick-production-likely-to-decline-in> (last visited Aug. 6, 2019) (Wyoming Game & Fish Department expected decline in 2018 based on an analysis of sage grouse wings provided by hunters); Nevada Department of Wildlife, Nevada Sage-grouse Lek Counts: Effort and Trends (2017), available at [http://sagebrushhco.nv.gov/uploadedFiles/sagebrushhconvgov/content/Meetings/2017/2017\\_GSG\\_Lek\\_Counts.pdf](http://sagebrushhco.nv.gov/uploadedFiles/sagebrushhconvgov/content/Meetings/2017/2017_GSG_Lek_Counts.pdf) (last visited Aug. 6, 2019) (reporting 10% decline in male lek attendance between 2016 and 2017).

--  
"Going completely vegetarian one day a week for a year is equivalent to not driving 1,160 miles."

Date: August 21, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St N.E.  
Salem, OR 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

Topic of my comment: Greater Sage-grouse

The future of Greater Sage-Grouse survival is unknown at this time for a number of reasons. Clearly things have changed since the filing of the application which already makes the biological surveys conducted and the mitigation plans outdated. Also it is likely that the Greater Sage-Grouse Comprehensive Conservation Strategy, 2006, ODFW's OAR 635-415-0025(7) and OAR 635-140-0000 to 0025, will be revised.

Climate change and planetary warming are driving rapid environmental change and destabilizing eco-systems creating additional enormous strains and stressors on the habitat of the greater sage-grouse. (Haak, conservation-portfolio-04172019.pdf) IPC's B2H transmission line construction and maintenance, with its 250' wide clear cut of sage brush under the line, will add additional threats to their survival. As noted in the DPO, page 314, lines 4-9: **The proposed facility would include the following facility components within sage-grouse core area habitat: 20.77-line miles of transmission line; 12.85 miles of new access roads; and 12.34 miles of substantially modified existing roads.** Habitat fragmentation and loss is a big concern for the overall survival of the species (Haak, conservation-portfolio-04172019.pdf). The Baker and Cow Creek PACs (Priority Areas of Concern), in particular, face extirpation (extinction) as this project creates another nail in their coffin.

There are additional threats to sage-grouse, a threatened species, from the B2H project.

1. Transmission lines and transmission towers cause sage-grouse mortality via bird collisions with the lines and facilitate raptor predation of sage-grouse ( [Wisdom et al. Sage-Grouse SAB Monograph 18.pdf](#) Page 17).

2. The 250' clearance of vegetation under the transmission lines will create loss of habitat and the introduction of invasive weeds. Building new roads and substantially modifying existing roads exacerbates the spread of cheat grass. Cheat grass is taking over sage brush habitat which in turns threatens the sage-grouse because the sage-grouse needs large healthy expanses of sage brush to survive. Cheat grass also dries out early in the season and is thus more fire prone, also endangering the sage-grouse. ( [Haak, conservation-portfolio-04172019.pdf](#) page 7)

3. The main direct threat to sage-grouse from transmission lines is the tendency of sage-grouse to avoid tall, and especially tall linear, structures -- they recognize these are potential locations of predators. (<https://pubs.usgs.gov/of/2014/1239/pdf/ofr2014-1239.pdf>, pg 8-9) The application, and the DPO, do not adequately account for the likely avoidance effects.

4. In its annual monitoring report in 2018, the ODFW concluded that sage-grouse populations throughout Oregon continue to decline



([https://www.dfw.state.or.us/wildlife/sagegrouse/docs/ODFW\\_2018\\_Sage-Grouse\\_Population\\_Report.pdf](https://www.dfw.state.or.us/wildlife/sagegrouse/docs/ODFW_2018_Sage-Grouse_Population_Report.pdf) at p. 1, hereinafter "ODFW 2018"). The state agency estimated that the 2018 spring population in Oregon was 18,421 individuals. This was a 10% decline from 2017 (population estimated at 20,510 birds), following a 7.7% decline from 2016. The 2018 population had now dropped to 37% below the 2003 baseline population estimate of 29,237 individuals (ODFW 2018). We expect ODFW to announce ever more severe declines in its 2019 report later this year. Other states have reported similar declines.[1]  
The Baker PAC, which will be affected by the B2H transmission line, has seen its population drop by 75.4% between 2003 and 2018, with a 10.9% decline from 2017 to 2018 alone. (ODFW 2018 at 32, 5).

The Draft Proposed Order and the application do not adequately address the enhanced danger that the B2H transmission line poses in light of the rapidly-decreasing populations. Neither the application nor the DPO actually cite the number of birds that will be affected, nor do they indicate that the sage-grouse populations in Oregon generally, and the Baker and Cow Valley PACs that will be affected by the B2H transmission line, are in serious and significant decline -- and that the addition of a significant habitat disruptor such as a linear transmission line could mark the death knell for these populations. Approval of a site certificate without considering the actual numbers of birds affected and the plummeting populations would be unlawful.

Sincerely,

Louise Squire

2105 Oak St  
La Grande, Oregon  
97850

squirel@eoni.com

[1] See, e.g., IdahoNews, Idaho male sage-grouse counts decline 25% in one year, *available at* <https://idahonews.com/news/local/idaho-male-sage-grouse-counts-decline-25-in-one-year> (last visited Aug. 1, 2019) (Idaho Fish & Game reporting 25% decline in male sage-grouse since 2018); Angus M. Thuermer Jr., WyoFile, Greater sage grouse counts show 3-year downward trend, *available at* <https://www.wyofile.com/greater-sage-grouse-counts-show-3-year-downward-trend/> (last visited Aug. 6, 2019); Wyo. Game & Fish Dep't, Sage grouse counts likely to decline in coming year, *available at* <https://wgfd.wyo.gov/News/Sage-grouse-chick-production-likely-to-decline-in> (last visited Aug. 6, 2019) (Wyoming Game & Fish Department expected decline in 2018 based on an analysis of sage grouse wings provided by hunters); Nevada Department of Wildlife, Nevada Sage-grouse Lek Counts: Effort and Trends (2017), *available at* [http://sagebrushheco.nv.gov/uploadedFiles/sagebrushheconvgov/content/Meetings/2017/2017\\_GSG\\_Lek\\_Counts.pdf](http://sagebrushheco.nv.gov/uploadedFiles/sagebrushheconvgov/content/Meetings/2017/2017_GSG_Lek_Counts.pdf) (last visited Aug. 6, 2019) (reporting 10% decline in male lek attendance between 2016 and 2017).



## **TARDAEWETHER Kellen \* ODOE**

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**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:53 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.38.19.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter signed by me and 54 other residents of La Grande expressing our concerns regarding the B2H Project and we request that EFSC deny the Site Certificate.

I have also sent a bound copy of this material by the US Postal Service.

Sincerely,

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850



August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the usage of the "Local Streets" <sup>1</sup> specifically the Modelaire-Hawthorne Loop) <sup>2</sup>, hereafter referred to as the "loop", of La Grande to access the site entrance. This residential "loop" was constructed without sidewalks for a new development around the early 1960s.

According to OAR 345-022-0110, Public Services (pg. 5. April 2017) "The applicant...must address all permanent and temporary impacts of the facility on housing, traffic, safety, police and fire protection, health care and schools." <sup>3</sup>

My impression from reviewing the application Page 17 <sup>4</sup> is that the applicant has not fully examined the final portion of the intended route nor does it fully recognize or address the need for traffic mitigation. This "loop" is the only access to/from thirty-six houses to the rest of the city. The area to the north of the "loop" is occupied by the Grande Ronde Hospital and Medical Clinic. Two blocks to the east is located the local high school and a grade school. <sup>2</sup>

In June of 2016, the Grande Ronde Hospital petitioned the City to have a conditional use for a parking lot expansion project next to Hawthorne. The Conditional Use Permit was approved subject to the Condition of Approval that "No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to residential standards and is not designed to support commercial traffic." <sup>5</sup>

The La Grande Director of Public Works, Kyle Carpenter, provided information regarding the widths for the streets in question. The two streets range from 33 feet to 37 feet in width with no sidewalks. I personally measured the area where the unpaved stem of Hawthorne leaves the "loop" to go up the hill. At the junction it measures 32 feet curb cut to curb cut and narrows to 18-21 feet in width as it goes around the corner up the hill. 6 The Public Works Director also provided pictures of the mapping system showing the existing utilities located in the "loop". 7-8. It should also be noted that from the entrance to the "loop" at Sunset Drive to the entrance of the site the road has a 16% grade.

Attachment U2 9 from the application shows an "Aerial Lift Crane to be Used During Construction" and the Transportation and Traffic Plan on page 19 10 lists a number of other vehicles anticipated to be used. Article 6.6 — Public Street Standards for the City of La Grande Section 6.6.002 states that "Collector Streets are designed to withstand normal trucks of an HS20 loading. Larger trucks are to utilize Arterial Streets where at all possible." 11 The majority of vehicles listed on page 19 exceed that limit and would be using a Local Street in addition to Arterial and Collector Streets. According to the Public Works Director the two streets in the "loop" were designed as Local Streets for residential use, able to accept the pressures of HS20 for the purpose of an occasional need such as a weekly garbage truck or an emergency vehicle but for no more than 5% of the time. The paving construction of these over 50 year old streets in the "loop" was not designed for repetitive use by vehicles heavier than a normal car. These streets in the "loop" have not been repaved, only patched when necessary, since they were first constructed.

The application does not address the "loop" specifically, but 3.1.2 (pg. 19) 10 and Table 6 (pg.17) 12 of the Transportation and Traffic Plan indicate there would be numerous vehicles using this route. Not knowing exactly just which vehicles would be on the "loop" daily but making a conservative estimate of 50 round trips (100 single) it would be a constant parade with one truck every 7.2 minutes. This is unacceptable for numerous reasons including constant excessive noise.

Not only would weight of the vehicles be a problem but the narrowness of the "loop" streets and the ninety degree blind curves that would have to be executed would be either impossible or extremely dangerous considering the turning radius for many of these large vehicles. The



already dangerous situation for a number of driveways that exit onto these "loop" streets at blind curves would be exacerbated. 13-14

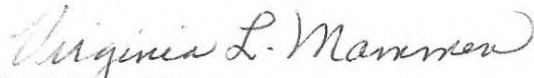
When considering only the traffic and safety issues listed above, the use of the "loop" as a part of the route for Idaho Power seems to be not only dangerous for the residents but unconscionable and irresponsible for Idaho Power to use such streets that are currently primarily for the neighborhood for walking (children to school, all ages for physical training), driving, or biking. I fear there are standards that are either not being considered or they are intentionally being ignored. There should be some common sense, courtesy and respect for the impact this project would impose on any neighborhood.

Finally, La Grande Ordinance Number 3077, which adopted Oregon State Traffic Laws by reference, states in Section 17 page 8 "It shall be unlawful for any person, firm or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes." Neither Modelaire/Hawthorne Loop nor Sunset Drive are posted as truck routes. 15-16

A site review and traffic plan must be completed prior to the cite certificate being issued and not 90 days prior to construction as stated.

For the above reasons I oppose the usage of the proposed route for the construction of the B2H transmission line.

Sincerely,



Virginia L. Mammen  
405 Balsa  
La Grande, Oregon. 97850

gmammen@eoni.com



**TABLE 1  
 STREET STANDARDS**

Functional Classification	ADT Volume	Speed (mph)	# of Travel Lanes	Travel Lane Width	Turn Lane or Median Width	Bike Lanes	Min. Bike Lane Width	On-Street parking
Downtown Arterial	10,000	20	2-3	11'	11'			both sides
Arterial	10,000	40-55	2-5	12'	4-14'	optional <sup>4</sup>	5'	none
Major Collector	2,000 - 10,000	25-45	2-3	11'	12'	required	5'	one or both sides
Minor Collector	1,000 - 2,000	25-35	2	11'	none	Optional <sup>5</sup>	5'	one or both sides
Local Street	0 - 1,000	15-25	2	10'	none	none	none	one or both sides

Functional Classification	Sidewalks	Min. Sidewalk Width	Planting Strip Width <sup>1</sup>	Total Paved Width <sup>2</sup>	Total ROW Width <sup>3</sup>	Private Access Spacing
Downtown Arterial	required	12'	3'6" <sup>6</sup>	49'	80'	200'
Arterial	required	5'	8'	36'-72'	80'-102'	200' - 400'
Major Collector	required	5'	8'	52'-60'	62'-90'	150' - 300'
Minor Collector	required	5'	8'	30'-48'	60'-78'	75' - 150'
Local Street	required	5'	8'	28'-36'	40'-66'	Each Lot

<sup>1</sup> A portion of the required planting strip width may be used instead as additional sidewalk width or reduced right of way, as appropriate.

<sup>2</sup> The minimum of the paved width was calculated with the following assumptions:

Arterials: Two (2) travel lanes, four foot (4') median divider, no center turn lane, no bike lanes.

Major Collectors: Two (2) travel lanes, two (2) bike lanes, no center turn lane, parking on one (1) side.

Minor Collectors: Two (2) travel lanes, parking on one (1) side of street, no bike lanes.

Local Streets: Two (2) travel lanes, parking on one (1) side of street.

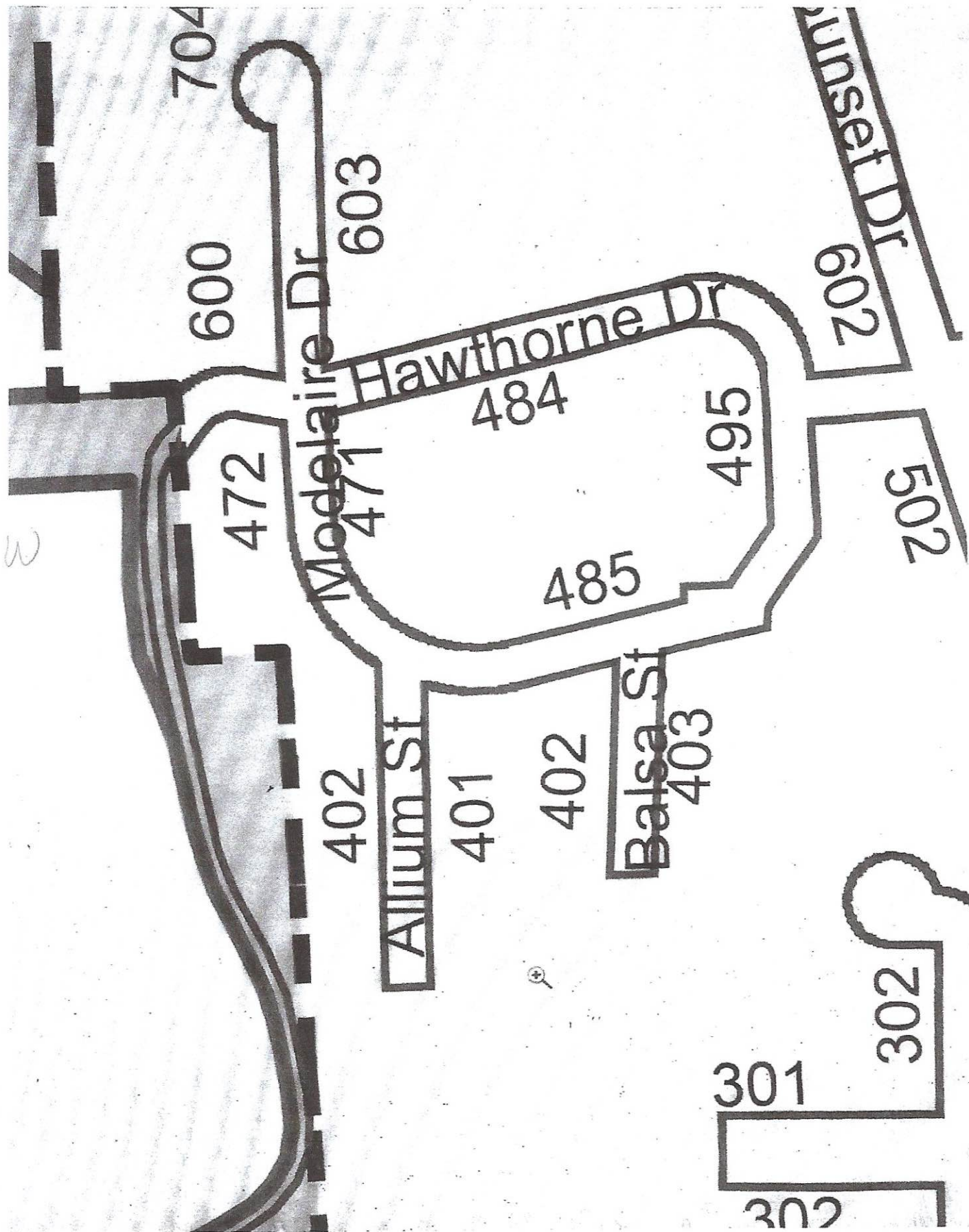
The maximum paved width for each street was calculated assuming the inclusion of all required and optional facilities. Minimum paved widths for each street are as required in Section 6.2.005 of this Code.

<sup>3</sup> These right-of-way width ranges are for new streets.

<sup>4</sup> Bike lanes should be provided on Arterials unless more desirable parallel facilities are designated and designed to accommodate bicycles.

<sup>5</sup> Bike lanes should be provided on Minor Collectors where traffic volumes or other factors warrant. Otherwise, Minor Collectors should be designed and designated as shared roadway facilities with wide outside travel lanes of 14' on important bike routes.

N



5



## Public Services

### OAR 345-022-0110

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## Waste Minimization

### OAR 345-022-0120

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## Need for a Facility

### OAR 345-023-0005

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## Specific Standards for Wind Facilities

### OAR 345-024-0010 and 345-024-0015

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## Specific Standards for Transmission Lines

### OAR 345-024-0090

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





Idaho Power Responses to Comments and Requests for Additional Information on the B2H APASC  
from the City of La Grande  
Compiled by ODOE. RAI's from the City of La Grande and Responses from IPC

U	U- Public Services include utilities such as road systems, water, sanitation services, power, and other amenities necessary for the construction.	Ordinance #2912, Series 1997 gives the City jurisdiction and control on all City street rights-of-way and Ordinance #3077, Series 2009, establishes the process and requirements for permits and licenses for uses of the streets that are not normal uses and may result in damages.	proposed helipad is a necessary supporting facility.	<p>The project construction has two major road systems through La Grande that are proposed for this project – Morgan Lake Road via Gekeler Lane, 'C' Avenue, Walnut Street, and on up Morgan Lake Road. Roads along these routes are used by the ambulance service for accessing the hospital, the public transit system on its normal daily route, citizens to access locations within and outside this area and also for the school bus system for transporting kids to the La Grande Middle School, La Grande High School and Central Elementary School. In addition to the vehicular modes of travel, those routes are heavily used by bicyclists and pedestrians. The other route that would be utilized is the same route with the exception of turning onto Sunset Drive and up Hawthorne Street to a private gravel road that heads up the area above Deal Canyon. Two other routes that are not addressed but that would be obvious access routes for construction would be South 12th Street and South 20th Street. As a general rule, City streets are built with ninety degree angles, which may restrict some</p> <p>To address the City's concerns regarding traffic and road use within the city's limits, Idaho Power has added the following proposed conditions to Exhibit K:</p> <p><u>Land Use Condition 9: Prior to construction in Union County, the site certificate holder shall complete the following to address traffic impacts in the county:</u></p> <p><u>a. The site certificate holder shall finalize, and submit to the department for its approval, a final county-specific transportation and traffic plan. The protective measures described in the draft Transportation and Traffic Plan in ASC Exhibit U, Attachment U-2, shall be included and implemented as part of the final county-specific plan, unless otherwise approved by the department;</u></p> <p><u>b. The site certificate holder shall work with the Union County Road Department and the City of La Grande Public Works Department to identify concerns related to Project construction traffic; and</u></p> <p><u>c. The site certificate holder shall develop traffic control measures to mitigate the effects of Project construction traffic.</u></p> <p><u>Land Use Condition 26: During construction in Union County, the site certificate holder shall conduct all work in compliance with the Union County-specific</u></p>
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#### IV. CONCLUSIONS

Based on the Findings of Fact above, the Planning Commission concludes that the application meets the requirements established in LDC Articles 8.5 and other applicable codes and Ordinances.

#### V. ORDER AND CONDITIONS OF APPROVAL

Based on the conclusions above, the Planning Commission approves the Conditional Use Permit as requested, subject to the following Conditions of Approval:

1. No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to a residential standards and is not designed to support commercial traffic.
2. Any existing driveway curb cuts along Hawthorn Drive bordering GRH's property, that are not used for residential purposes, shall be removed and replaced with City standard improvements that exists adjacent to such areas.
3. There is a storm sewer line extending through the project area that shall to be protected. Any improvements that may affect the storm sewer line shall be reviewed and approved by the Public Works Director.

#### VI. STANDARD CONDITIONS OF APPROVAL FOR LAND USE APPLICATIONS

1. **Revisions to a Valid Conditional Use Permit:** Any variations, alterations, or changes in a valid Conditional Use Permit requested by the deed holder shall be considered in accordance with the procedures of the Land Development Code as though a new Conditional Use Permit were being applied for.
2. **Public Works Standards:** Where a development involves work within the public right-of-way, a Right-of-Way Permit shall be obtained from the Public Works Department in advance of commencing with any work in the right-of-way. All improvements within the public right-of-way shall be in conformance with the most recent adopted City of La Grande *"Engineering Standard Drawings and Specifications for Construction Manual."*
3. **Building Permits:** The City of La Grande Building Department shall be contacted early in the process and in advance of development to coordinate and obtain required building, plumbing, electrical and/or mechanical permits. All required permits shall be acquired in advance of construction.

#### VI. OTHER PERMITS AND RESTRICTIONS

The applicant and property owner is herein advised that the use of the property involved in this application may require additional permits from the City of La Grande or other local, State or Federal Agencies.

The City of La Grande land use review, approval process and any decision issued does not take the place of, or relieve the applicant of responsibility for acquiring such other permits, or satisfy any restrictions or conditions thereon. The land use decision herein does not remove, alter, or impair in any way the covenants or restrictions imposed on this property by deed or other instrument.

The land use approvals granted by this decision shall be effective only when the rights granted herein have been exercised and commenced within one (1) year of the effective date of the decision. In case such right has not been exercised and commenced or an extension obtained, the approvals granted by this decision shall become null and void. A written request for an extension of time shall be filed with the Planning Department at least thirty (30) days prior to the expiration date of the approval.





Virginia Mammen &lt;4gmammen@gmail.com&gt;

**Modelaire Roadway Specifications**

3 messages

**Kyle Carpenter** <KCarpenter@cityoflagrande.org>  
To: "gmammen@eoni.com" <gmammen@eoni.com>

Fri, Jul 12, 2019 at 1:51 PM

I have attached a couple pictures of our mapping system that will give you a sense of where existing utilities are in Modelaire and Hawthorne. As for the widths of the roadways, I took measurements in multiple places, and found the following:

- Modelaire Drive (F Avenue) between Sunset Blvd and Hawthorne Drive is approximately 33 feet wide with a grade of about 5 Percent.
- Hawthorne Drive is approximately 32 feet wide at the bottom near the intersection of Modelaire/F Avenue and widens to about 34 feet where it intersects Modelaire at the top of the hill. The grade heading up hill is approximately 15.5 Percent.
- Modelaire Drive is generally 36 feet wide with some minor variability generally less than a foot (35' to 37'). On the southernmost segment of the roadway where the majority of the elevation gain is observed the grade is approximately 16 Percent.

Let me know if there are any other specifications of these roadways that you are interested in that I have missed. Have a great weekend and thanks for the treats, the guys were very appreciative.

*Kyle Carpenter, PE*

**Public Works Director**

**City of La Grande**

**Public Works**

Ph: (541) 962-1325

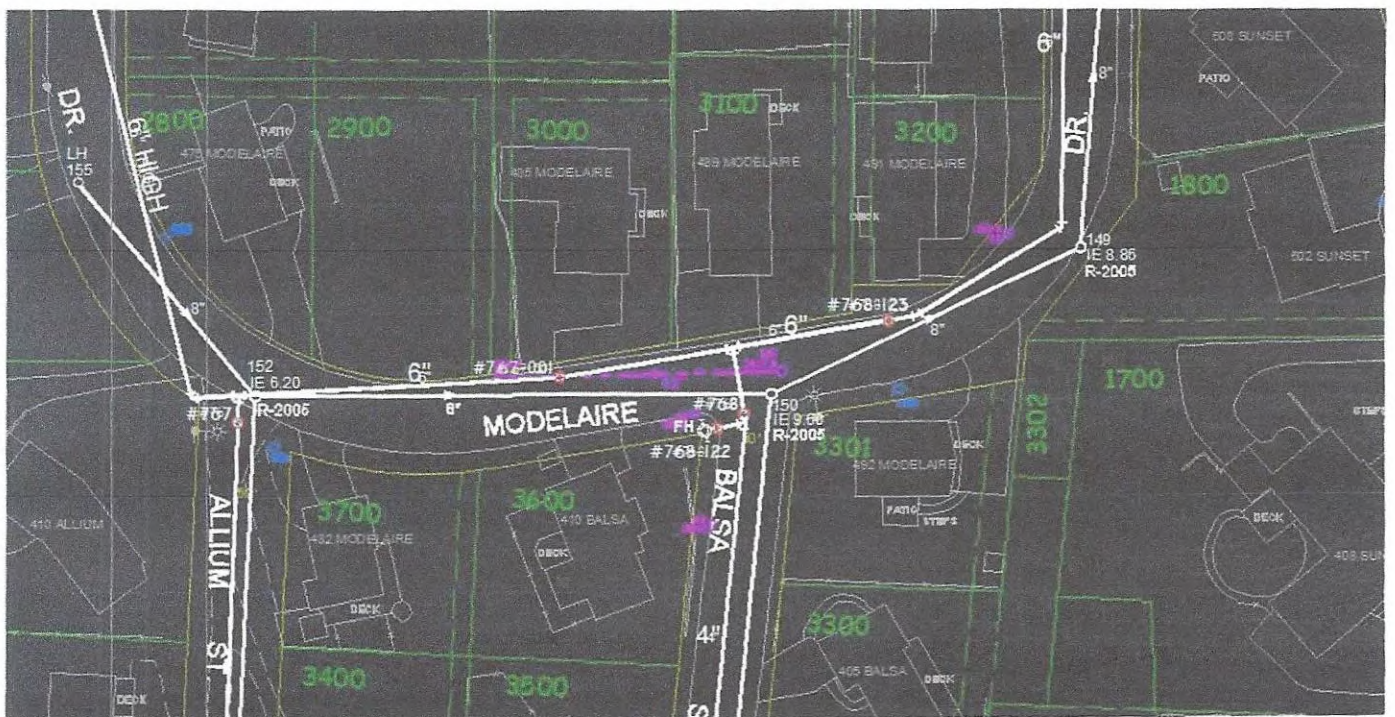
Fax: (541) 963-4844

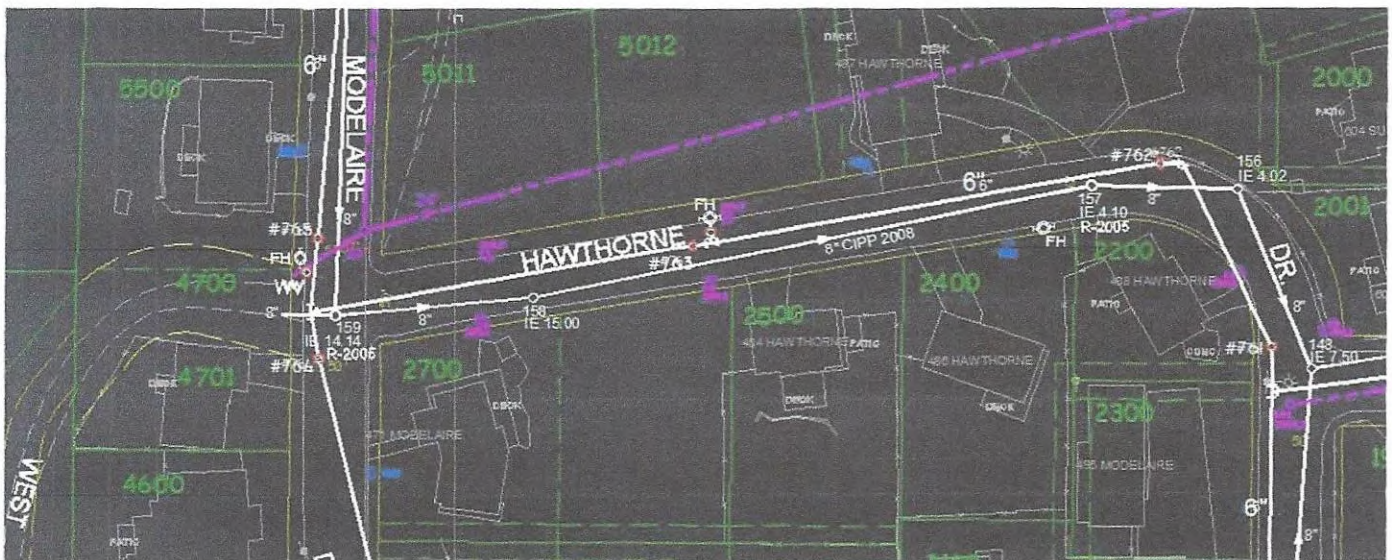
**2 attachments**

**Hawthorne.jpg**  
150K

**Modelaire.jpg**  
120K









attachment U2

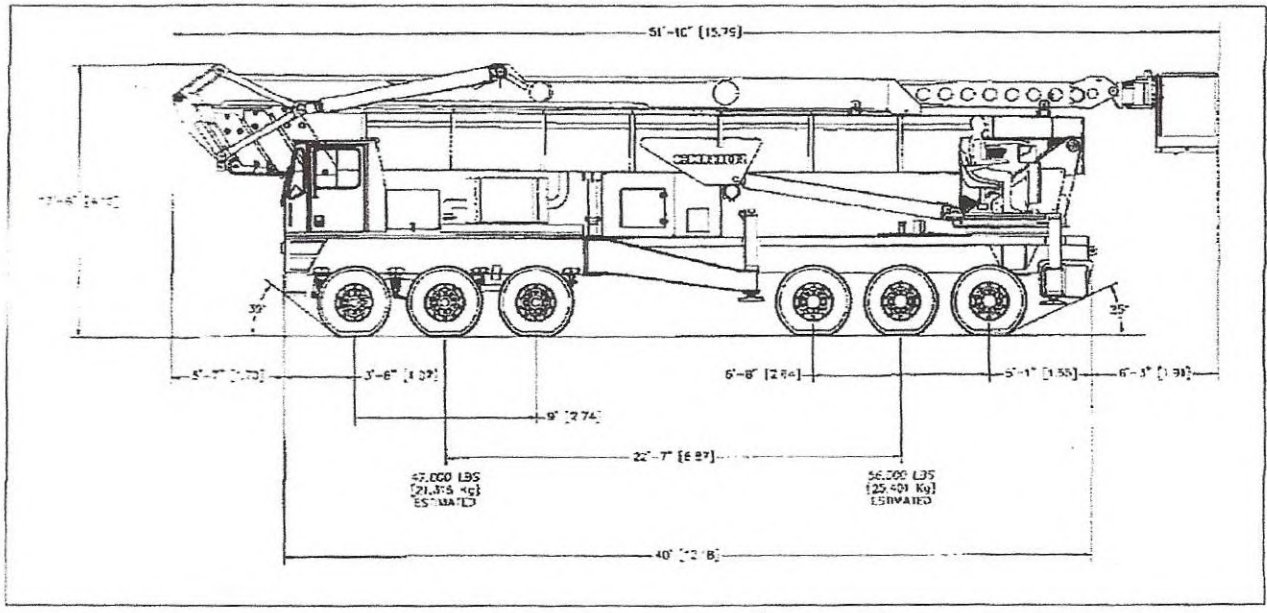


Figure 2. Example Aerial Lift Crane to be Used During Construction (Roadable Length 52 Feet; Width 8 Feet 6 Inches)



The following is a summary of anticipated equipment to be used for each transmission-line construction activity.

- Survey work: pickup trucks or ATVs.
- Timber removal: pickup trucks, feller bunchers, dump trucks, wood chippers.
- Road construction: pickup trucks, bulldozers, motor graders, and water trucks.
- Hole digging, installation of directly embedded structures, or foundation installation: pickup trucks, 2-ton trucks, digger derrick trucks, hole diggers, bulldozers, concrete trucks, water trucks, cranes, hydro cranes, wagon rock drills, dump trucks, and front-end loaders.
- Hauling lattice steel members, tubular poles, braces, and hardware to the structure sites: steel haul trucks, carry alls, cranes, and forklifts.
- Assembly and erection of structures: pickup trucks, 2-ton trucks, carry alls, cranes, and a heavy lift helicopter.
- Wire installation: pickups, wire reel trailers, diesel tractors, cranes, 5-ton boom trucks, splicing trucks, three drum pullers, single drum pullers, tensioner, sagging dozers, carry-alls, static wire reel trailers, bucket trucks, and a light duty helicopter.
- Final cleanup, reclamation, and restoration: pickup trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, hydro-seed truck, and water trucks.

The highest level of traffic will be when the wire stringing operations begin while several other operations are occurring at the same time, which will likely include ROW clearing, installing foundations, hauling steel, and assembling and erecting structures. For the station work, the highest level of traffic will be during site grading and foundation installation. For the communication station sites, the highest level of traffic will be during grading and site preparation.

Detailed estimates of trips generated by transporting Project construction equipment will be provided by the construction contractor prior to construction.

### **3.1.3 Traffic Related to Timber Removal**

In forested areas, the Project will require removal of timber from the Project ROW and for construction and improvement of access roads. Specific timber harvest plans have not been finalized. Logs from timber clearing may be transported to nearby sawmills. Decisions regarding transportation routes for harvested timber will be made following completion of a timber harvest plan, and the number of log truck trips will be estimated when the timber harvest plan has been finalized. Logging slash will remain onsite if possible. For additional discussion regarding removal of timber in forested areas, see Exhibit K, Attachment K-2, ROW Clearing Assessment.

### **3.1.4 Impacts to V/C Ratios**

Based on the estimated trip generation numbers in Tables 4 and 6, a maximum of approximately 1,294 daily one-way vehicle trips are expected within any one construction spread. To facilitate traffic and other analyses, the two construction spreads are divided into smaller sections based on similar construction windows and seasonal weather restrictions. Not all construction sections will have the same number of concurrent construction activities, depending on how the construction contractor sequences and executes the Project. Some sections will have fewer daily vehicle trips. For the purposes of the traffic analysis, the spreads are divided into five sections with multi-use areas that could have additive traffic impacts. The sections are assumed to have approximately equal levels of activity. The 1,294 daily one-way trips per spread divided over five sections of more concentrated traffic results in 259 daily one-

## **ARTICLE 6.6 – PUBLIC STREET STANDARDS**

### **SECTION 6.6.001 - PURPOSE**

Upon the request of the La Grande City Council, a variety of street design standards have been reviewed and are now incorporated in the Land Development Code.

### **SECTION 6.6.002 - CLASS I IMPROVEMENT STANDARDS**

This classification will cover those streets that are designed to meet the standards for an expected life of twenty (20) years or more. The attached drawings shall be the minimum standard for those streets in this classification. All streets designated as Federal Aid Urban Streets (F.A.U.) shall be constructed under these design standards. Streets in this designation shall be constructed with sidewalks when at all possible in an effort to increase pedestrian safety. Collector streets are designed to withstand normal trucks of an HS 20 loading. Larger trucks are to utilize Arterial streets where at all possible. This level of development shall be the ultimate goal for all streets within the City of La Grande.

Possible means of financing available for this Class shall be methods A, B, C, D, E, F, G, and H in Section 6.6.006.

#### **A. Advantages**

1. The construction life is extended to a period above other City standards.
2. The visible aesthetics in relationship to having curbs and a blacktop surface with landscaping or concrete driveways and a sidewalk is generally appealing to the public.
3. Easy maintenance for the Public Works Department for cleaning and minor repair.
4. Storm sewer drainage is confined within the bounds of the curbs during minor flooding periods.
5. Parking is restricted to a solid barrier, that being the curb; this restricts parking in the area on the back side of the curb and confines travel to the street surface.
6. Defined areas for possible cross walks, signs, power poles, and other utilities that are restricted to the outside areas behind the curbs.
7. It allows for a wide range of financing methods and is to City standards for a ten (10) year Bancroft bonding.
8. Provides a dust free surface.

#### **B. Disadvantages**

1. The extreme high level of cost that is incurred with this type of development.

### **SECTION 6.6.003 - CLASS II IMPROVEMENT LEVEL**

Streets constructed in this classification shall be constructed to the same standards as Class I Streets with the exception of the form of drainage system. These streets shall meet the standards as shown on the attached drawing. This level of construction shall be only utilized in substitution for Class I Streets when it is determined by the City Council at the recommendation of the City Engineer or Engineering Superintendent, that an adequate drainage system cannot be installed for a Class I Street.



Table 6. Construction Vehicle Trips per Day per Construction Spread

Construction Crew Type	Construction Vehicles					
	Light Construction Vehicles			Heavy Construction Vehicles		
	Number of Pickups/ Mechanic Trucks (per day)	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)	Number of Other Vehicles	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)
Substation Construction	20	2	40	5	2	10
ROW Clearing	9	4	36	5	4	20
Roads/ Pad Grading	9	4	36	9	2	18
Foundations	9	2	18	5	8	40
Tower Lacing (assembly)	27	2	54	0	0	0
Tower Setting (erection)	20	2	40	0	0	0
Wire Stringing	9	4	36	9	4	36
Restoration	3	2	6	0	0	0
Blasting	5	4	20	0	0	0
Material Delivery	20	8	160	12	2	24
Mechanic and Equipment Mgmt.	5	6	30	0	0	0
Refueling	0	0	0	5	4	20
Dust Control	0	0	0	5	4	20
Construction Inspection	5	8	40	0	0	0
Concrete Testing	5	4	20	0	0	0
Environmental Compliance	9	6	54	0	0	0
Surveyors	5	3	30	0	0	0
<b>Totals</b>	—	—	<b>620</b>	—	—	<b>188</b>



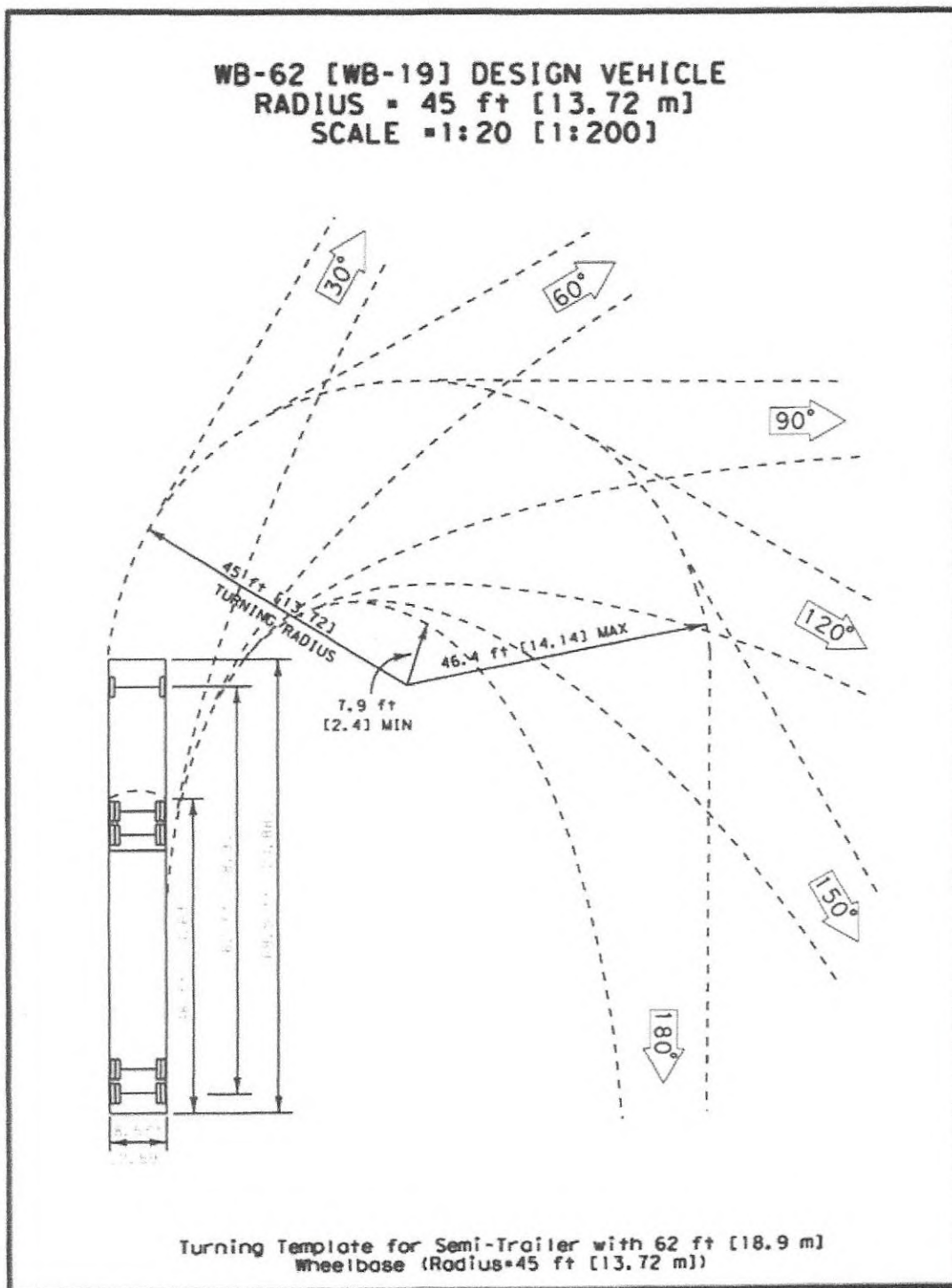
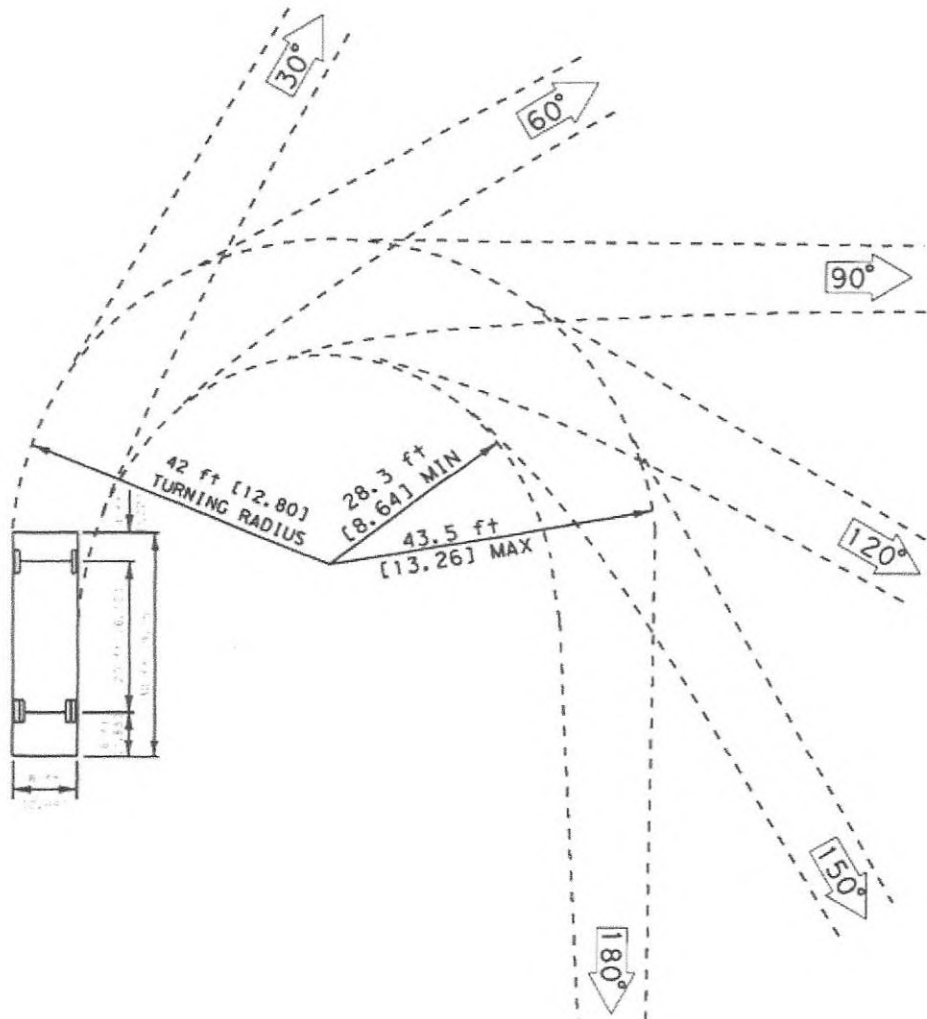


Figure 7-4. Turning Template for Semi-Trailer with 62 ft [18.9 m] Wheelbase, (not to scale). Click [here](#) to see a PDF of the image.

**SINGLE UNIT (SU) TRUCK DESIGN VEHICLE**  
**TURNING RADIUS = 42 ft [12.80 m]**  
**SCALE = 1:20 [1:200]**



Turning Template for Single Unit Trucks or Buses

Exhibit 15

**CITY OF LA GRANDE  
ORDINANCE NUMBER 3077  
SERIES 2009**

**AN ORDINANCE CONTROLLING VEHICULAR AND PEDESTRIAN TRAFFIC, PARADES  
AND PROCESSIONS AND ISSUANCE OF PERMITS; PROVIDING PENALTIES; AND  
REPEALING ORDINANCE NUMBER 2845, SERIES 1993; ALL AMENDING ORDINANCES  
AND ALL OTHER ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HERewith;  
AND DECLARING AN EFFECTIVE DATE**

THE CITY OF LA GRANDE ORDAINS AS FOLLOWS:

**Section 1.** This Ordinance may be cited as the City of La Grande Uniform Traffic Ordinance.

**Section 2.** APPLICABILITY OF STATE TRAFFIC LAWS.

Oregon Revised Statutes, Chapter 153, and the Oregon Vehicle Code, ORS Chapter 801 and 822, as now constituted, are adopted by reference. Violation of an adopted provision of those chapters is an offense against the City.

**Section 3.** DEFINITIONS

In addition to those definitions contained in the Oregon state Motor Vehicle Code, the following words or phrases, except where the context clearly indicates a different meaning, shall mean:

a. Alley

A street or highway primarily intended to provide access to the rear or side of lots or buildings in urban areas and not intended for through vehicular traffic.

b. Bicycle

A bicycle is a vehicle that:

1. Is designed to be operated on the ground on wheels;
2. has a seat or saddle for use of the rider;
3. is designed to travel with not more than three (3) wheels in contact with the ground;
4. is propelled exclusively by human power; and,
5. has every wheel more than fourteen inches (14") in diameter or two (2) tandem wheels, either of which is more than fourteen inches (14") in diameter.

c. Bicycle Lane

That part of the highway, adjacent to the roadway, designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

d. Bicycle Path

A public way, not part of a highway, which is designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

e. Block

The part of one side of a street lying between the two (2) nearest cross streets.

f. Central Business District



a. City Regulation of Special Movement of Oversized Load

The applicant shall submit an application to the City Manager or designee, showing the terminal points of the purported movement; the proposed route; the nature of the movement requested, including the weight and dimensions of the vehicle, load, machine, building, or structure to be moved; the time, date and duration of the proposed movement.

b. Special Movement Permit

A permit shall be required to move any vehicle, structure, or load on, or to access a street when, after preparation for movement, the vehicle, structure or load exceeds fourteen feet (14') in height, requires the use of guy wires, or could result in the blockage of a street. An approved application may serve as a permit, and a copy of the approved application shall be provided to the applicant.


**Section 17. TRUCK ROUTES**

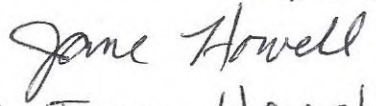
- a. It shall be unlawful for any person, firm, or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes.
- b. Any vehicle with a gross weight over 26,000, pounds specifically picking up deliveries or making deliveries to any business or residence located on a street that is not a truck route will be exempted if the vehicle is driven from the truck route to the destination in the shortest, most direct, and safest route.
- c. The use of Jacob brakes shall not be allowed within the city limits of La Grande, Oregon.
- d. Truck routes will be posted as follows:
  1. Walnut street north from the city limits to C Avenue;
  2. C Avenue east from Walnut Street to Gekeler Avenue;
  3. Gekeler Avenue east to the city limits;
  4. 12th street south from Gekeler Avenue to the city limits;
  5. 2nd Street south from the city limits to Adams Avenue;
  6. Monroe Avenue east from Spruce Street to Highway 82;
  7. Jackson Avenue east from Spruce Street, and
  8. Spruce Street south from the city limits to Monroe.

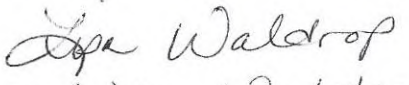
**Section 18. IMPOUNDMENT AND DETENTION OF VEHICLES**

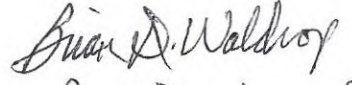
- a. Whenever a vehicle is placed in a manner or location that constitutes an obstruction to traffic or a hazard to public safety, a police officer or enforcement officer shall order the owner or operator of the vehicle to remove said vehicle. If the vehicle is unattended, the officer or enforcement officer may cause the vehicle to be towed and stored at the owner's expense. The owner shall be liable for the costs of towing and storing, notwithstanding that the vehicle was parked by another or that the vehicle was initially parked in a safe manner but subsequently became an obstruction or hazard.

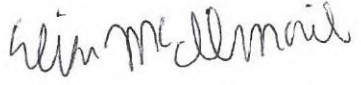
I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE   
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SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

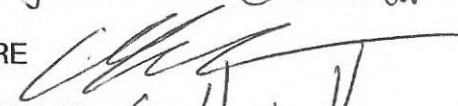
  
Jessie Huxell  
472 Modelaire Dr. LaGrande OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

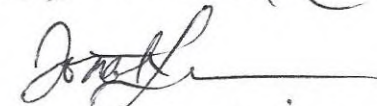
  
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CHRIS Huxell @ EMAIL.COM

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D. Dale Mammen

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Judie Arritola

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*Pasco Arritola*

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Pasco Arritola

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PSITOLA@CHARTER.NET

SIGNATURE

*John Garutz*

PRINTED NAME


John Garutz


ADDRESS


484 Hawthorne LG, OR 97850


EMAIL


I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

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SIGNATURE: 

PRINTED NAME Shawn K. Mangum

ADDRESS 2905 E. M. Ave,

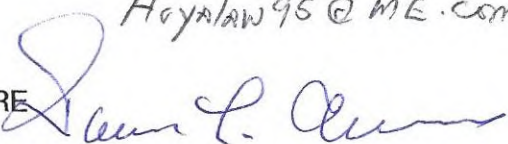
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CONNIE L. ALLEN 541-9637720  
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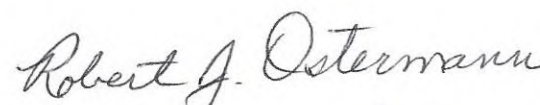
  
Linda Snyder  
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SIGNATURE

PRINTED NAME

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Robert J. Ostermann  
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SIGNATURE

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ADDRESS

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Robin J. Ostermann  
495 Modelaire Dr La Grande, OR 97850



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SIGNATURE

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Robin Stedfeld

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*John Yeates*

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JOHN YEATES

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I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE 

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PRINTED NAME GERALDINE BRASETH-PALMER

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PRINTED NAME Jean BAPH


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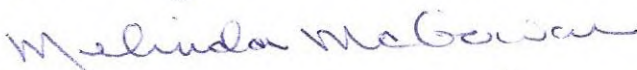
EMAIL JBaph19@gmail.com





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PRINTED NAME Cory Sexton  
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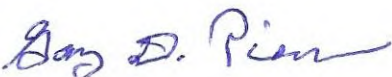
SIGNATURE   
PRINTED NAME Melinda McGowan  
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PRINTED NAME Keith D. Hudson  
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SIGNATURE   
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SIGNATURE 

PRINTED NAME Gary D. Pierson

ADDRESS 489 Modelaire Drive, La Grande OR 97850

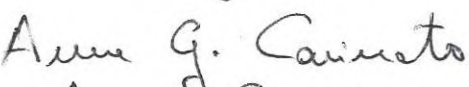
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PRINTED NAME LYNN WHEELER DUNCAN

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PRINTED NAME Anne G. Cavinato

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SIGNATURE 

PRINTED NAME ANGELA Sherer

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EMAIL asherer@frontier.com

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SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
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SIGNATURE *Heather M. Null*  
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SIGNATURE *Lindsey McCullough*  
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EMAIL lindz\_mm91@hotmail.com

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL



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SIGNATURE *Merle E. Comfort*  
PRINTED NAME MERLE E. COMFORT  
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SIGNATURE *Robin L. Maille*  
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SIGNATURE *Bruce C Kevan*  
PRINTED NAME Bruce C Kevan  
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SIGNATURE *Carol S. Summers*  
PRINTED NAME CAROL S. SUMMERS  
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EMAIL carolsummers1938@gmail.com

SIGNATURE *Caroline Kaye Juniper*  
PRINTED NAME Caroline Kaye Juniper  
ADDRESS 406 NTH ST. LaGrande - OR 97850  
EMAIL



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SIGNATURE

*Gerald D. Juniper*

PRINTED NAME

*Gerald Darwin Juniper*

ADDRESS

*406 4<sup>th</sup> St. LaGrande, OR. 97850*

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:28 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposal Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.14.06.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter sign by me and 46 other residents of La Grande expressing our concerns regarding the B2H Project and requesting that EFSC Deny the Site Certificate.

I have also sent a bound copy of this material by US Postal Service.

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850

August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, Oregon. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the predicted noise levels resulting from construction and operation of the proposed Boardman to Hemingway Transmission Line Project. I would like to address the noise coming from the blasting and rock breaking specifically above the area at the top of Modelaire Drive 1 both to the north and the south of that area and also the construction traffic noise that that will impact the west hills and the area below.

In Exhibit X page X-9 3.3.1.1 2 blasting and rock breaking is mentioned saying that "Modern blasting techniques include the electronically controlled ignition of multiple small explosive charges in an area of rock that are delayed fractions of second, resulting in a total event that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140dBA at the blast location or over 90 dBA within 500 feet." This sounds oh so "don't worry about it, it will be OK just over in a split second." Living in this area off Modelaire Drive, I don't find this at all comforting. And the fact that this will be overseen by properly licensed personnel and all of the necessary authorizations doesn't help anything either.

The area in question, which for such inordinate construction is extremely close to many residents, has been my home for over 50 years and during



related medical problems and exhibit various reactions to loud noises.<sup>10</sup>  
These children also live in the neighborhoods to be affected by the noise so they would be impacted coming and going to school, at home and also while at school. To impose the constant possibility of loud noises is cruel, disrespectful and totally unacceptable. <sup>11</sup>

For a project like this involving blasting and heavy machinery noise so close to homes, schools, and medical facilities impacting hundreds of peoples' daily lives, the day to day agitation, wondering what is coming next, fear and being on constant alert are not just addressed by some type of mitigation but must be addressed by a route that is much less impactful to peoples' safety, sanity, and health.

Sincerely,

A handwritten signature in cursive script that reads "Virginia L. Mammen".

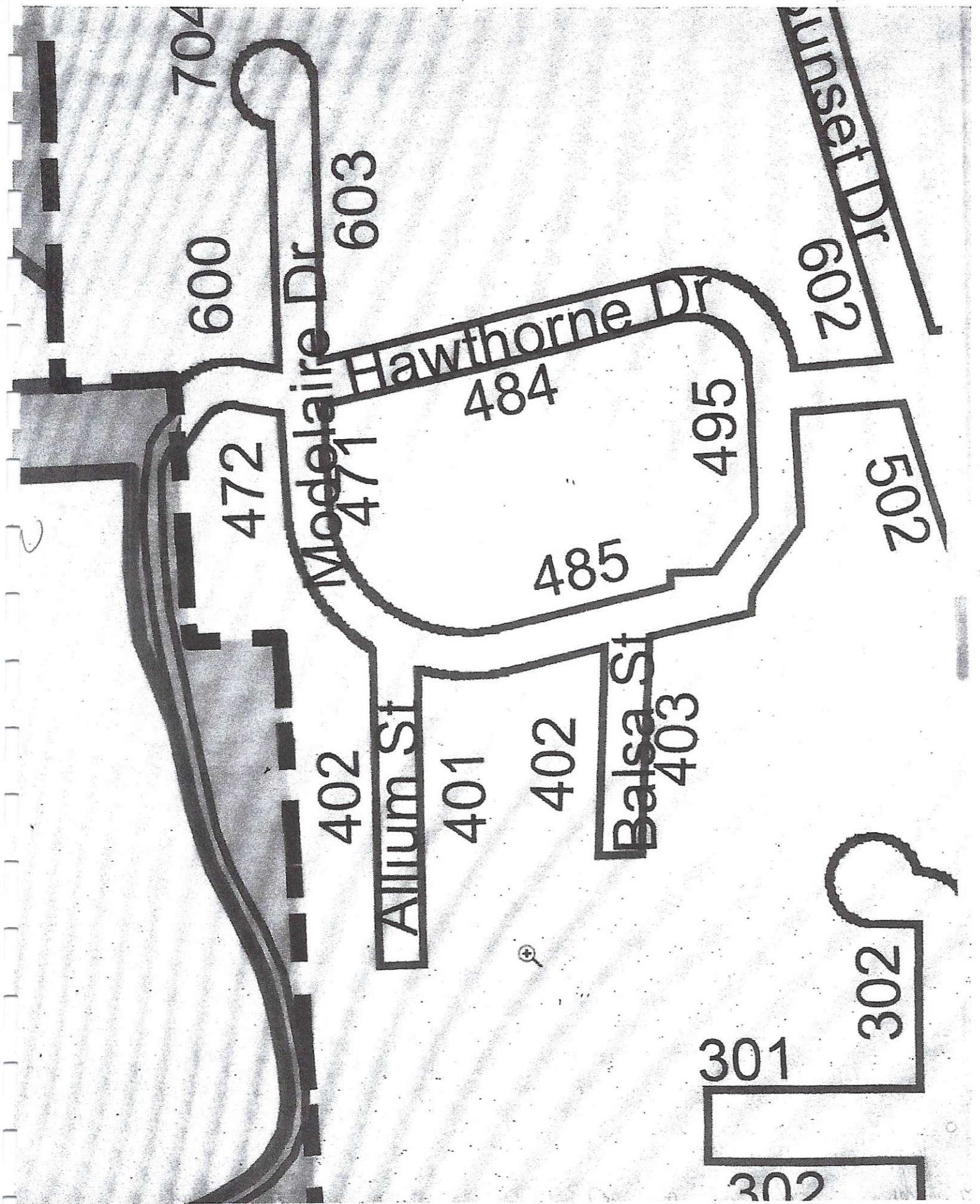
Virginia L. Mammen

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N





### 3.3 Predicted Noise Levels

OAR 345-021-0010(1)(x)(A): Predicted noise levels resulting from construction and operation of the proposed facility.

#### 3.3.1 Construction Noise

##### 3.3.1.1 Predicted Construction Noise Levels

Project construction will occur sequentially, moving along the length of the Project route, or in other areas such as near access roads, structure sites, conductor pulling sites, and staging and maintenance areas. Overhead transmission line construction is typically completed in the following stages, but various construction activities may overlap, with multiple construction crews operating simultaneously:

- Site access and preparation
- Installation of structure foundations
- Erecting of support structures
- Stringing of conductors, shield wire, and fiber-optic ground wire

The following subsections discuss certain construction activities that will periodically generate audible noise, including blasting and rock breaking, implosive devices used during conductor stringing, helicopter operations, and vehicle traffic.

#### **Blasting and Rock Breaking**

Blasting is a short-duration event as compared to rock removal methods, such as using track rig drills, rock breakers, jackhammers, rotary percussion drills, core barrels, or rotary rock drills. Modern blasting techniques include the electronically controlled ignition of multiple small-explosive charges in an area of rock that are delayed fractions of second, resulting in a total event duration that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140 dBA at the blast location or over 90 dBA within 500 feet.

Lattice tower foundations for the Project typically will be installed using drilled shafts or piers; however, if hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture the rock to reach the required depth to install the structure foundations. Final blasting locations will not be identified until an investigative geotechnical survey of the analysis area is conducted during the detailed design.

The contracted blasting specialist will prepare a blasting plan that demonstrate compliance with applicable state and local blasting regulations, including the use of properly licensed personnel and the acquisition of necessary authorizations. The Framework Blasting Plan is set forth in Exhibit G, Attachment G-5.

#### **Implosive Devices**

An implosive conductor splice consists of a split-second detonation with sound and flash. Implosive splicing activities are anticipated to be limited to daytime hours. A blasting plan will be developed by an individual certified and licensed to perform the work. The plan will communicate all safety and technical requirements including, but not limited to, delineation of the controlled access zone and distance away from residences.



## **Public Services**

### **OAR 345-022-0110**

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## **Waste Minimization**

### **OAR 345-022-0120**

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## **Need for a Facility**

### **OAR 345-023-0005**

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## **Specific Standards for Wind Facilities**

### **OAR 345-024-0010 and 345-024-0015**

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## **Specific Standards for Transmission Lines**

### **OAR 345-024-0090**

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





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## Department of Environmental Quality

### Chapter 340

#### Division 35

#### NOISE CONTROL REGULATIONS

**340-035-0035****Noise Control Regulations for Industry and Commerce****(1) Standards and Regulations:**

(a) **Existing Noise Sources.** No person owning or controlling an existing industrial or commercial noise source shall cause or permit the operation of that noise source if the statistical noise levels generated by that source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 7, except as otherwise provided in these rules. [Table not included. See ED. NOTE.]

**(b) New Noise Sources:**

(A) **New Sources Located on Previously Used Sites.** No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies. [Table not included. See ED. NOTE.]

**(B) New Sources Located on Previously Unused Site:**

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b)-(f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

**(iii) For noise levels generated or caused by a wind energy facility:**

(I) The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

(II) The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with wind speed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.

(III) The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

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(2) Compliance. Upon written notification from the Director, the owner or controller of an industrial or commercial noise source operating in violation of the adopted rules shall submit a compliance schedule acceptable to the Department. The schedule will set forth the dates, terms, and conditions by which the person responsible for the noise source shall comply with the adopted rules.

(3) Measurement:

(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

(B) That point on the noise sensitive property line nearest the noise source.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);

(b) Nothing in this rule shall preclude the Department from conducting separate or additional noise tests and measurements. Therefore, when requested by the Department, the owner or operator of an industrial or commercial noise source shall provide the following:

(A) Access to the site;

(B) Reasonable facilities, where available, including but not limited to, electric power and ladders adequate to perform the testing;

(C) Cooperation in the reasonable operation, manipulation, or shutdown of various equipment or operations as needed to ascertain the source of sound and measure its emission.

(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:

(a) Emergency equipment not operated on a regular or scheduled basis;

(b) Warning devices not operating continuously for more than 5 minutes;

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

(d) Sounds resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad only to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; but this exemption does not apply to any standard, control, license, regulation, or restriction necessitated by special local conditions which is approved by the Administrator of the EPA after consultation with the Secretary of Transportation pursuant to procedures set forth in Section 17(c)(2) of the Act;

(e) Sounds created by bells, chimes, or carillons;

(f) Sounds not electronically amplified which are created by or generated at sporting, amusement, and entertainment events, except those sounds which are regulated under other noise standards. An event is a noteworthy happening and does not include informal, frequent, or ongoing activities such as, but not limited to, those which normally occur at bowling alleys or amusement parks operating in one location for a significant period of time;

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment;

(i) Sounds created by lawn care maintenance and snow removal equipment;

(j) Sounds generated by the operation of aircraft and subject to pre-emptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not pre-emptively regulated by the federal government or controlled under OAR 340-035-0045;

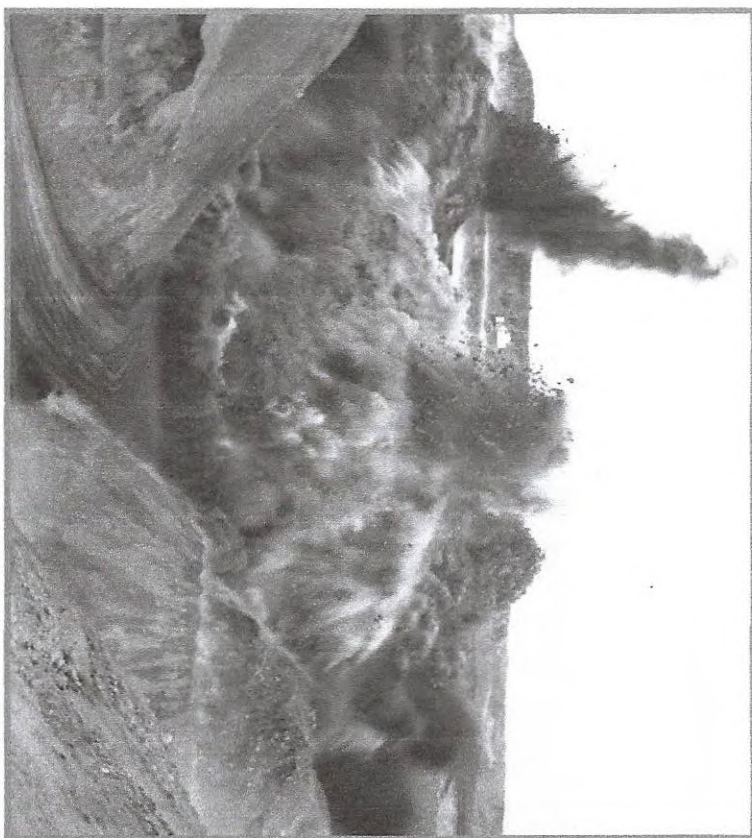


## Controlling the Adverse Effects of Blasting

This module addresses the control of offsite impacts that result from blasting, namely:

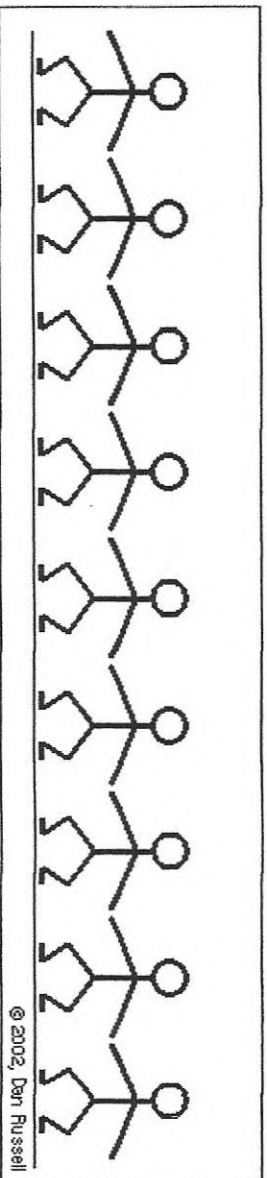
- vibrations,
- airblast, and
- flyrock.

Much of the information in the module is derived from the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The performance standards apply to all surface coal mines. Similar standards have been adopted on some State and local levels and applied to non-coal blasting operations such as quarrying and construction.



## Part I: Ground Vibrations, Airblast, and Flyrock

Explosive energy is used to break rock. However, the use of this energy is not 100-percent efficient. Some of the energy escapes into the atmosphere to generate **airblast or air vibrations**. Some of the energy also leaves the blast site through the surface soil and bedrock in the form of **ground vibrations**.



Both air and ground vibrations create waves that disturb the material in which they travel. When these waves encounter a structure, they cause it to shake. Ground vibrations enter the house through the basement and airblast enters the house through the walls and roof.

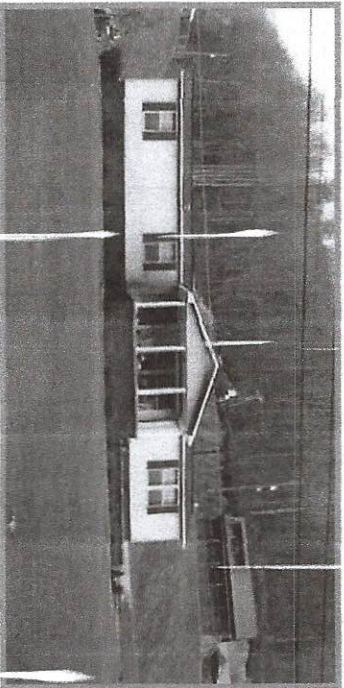
Airblast may be audible (noise) or in-audible (concussion). When outside a house the blast may be heard because of the noise, however noise has little impact on the structure. The concussion wave causes the structure to shake and rattles objects hanging on walls or sitting on shelves. This "interior noise" will alarm and startle people living in the house.

**Flyrock** is debris ejected from the blast site that is traveling through the air or along the ground. Flyrock the single most dangerous adverse effect that can cause property damage and personal injury or death.



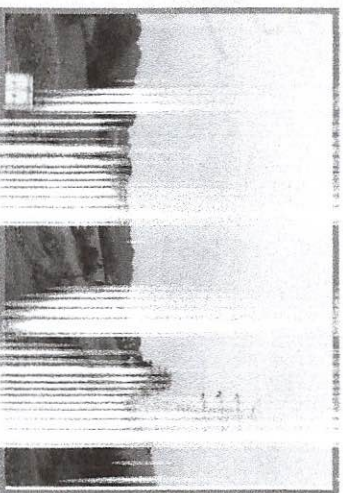
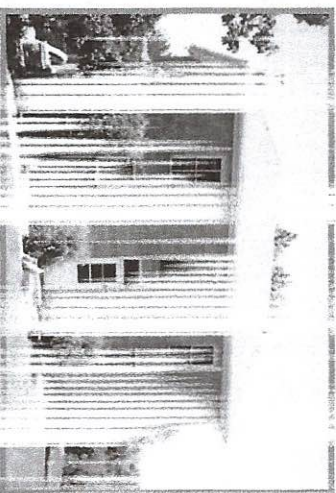
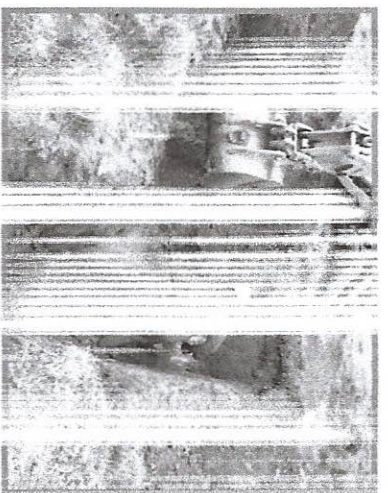
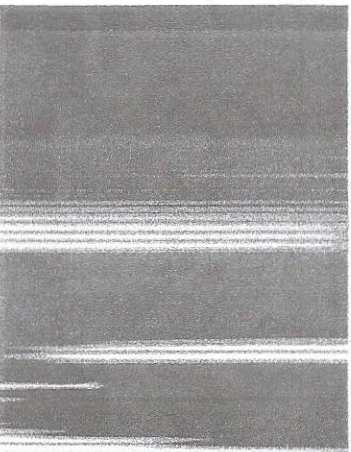
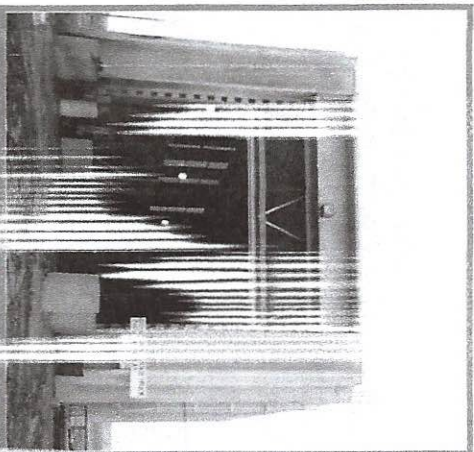
# Blasting Impacts on Structures

Both above-ground and below-ground structures are susceptible to vibration impacts. Structures can include onsite mine offices and buildings, as well as offsite residences, schools, churches, power-transmission lines, and buried pipelines. Some of these structures may include historic or cultural features sensitive to even low levels of vibrations.



It is important to understand:

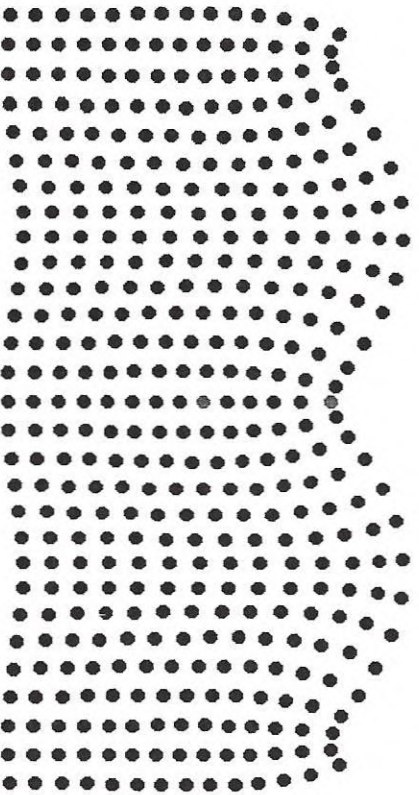
1. the causes of ground vibrations and airblast, and
2. what practices can be followed to control and minimize the adverse effects





# Ground Vibrations

Ground vibrations propagate away from a blast site as Rayleigh (or surface) waves. These waves form a disturbance in the ground that displaces particles of soil or rock as they pass by. Particle motions are quite complicated. At the ground surface (free boundary), measured particle motions have the greatest displacements, and displacements decrease with depth (see the illustration below). At a depth of between 20 to 50 feet below ground surface, particle displacements are barely detectable. Structures that are well coupled to the ground tend to move with this motion; structures buried in the ground are less affected by surface motions.



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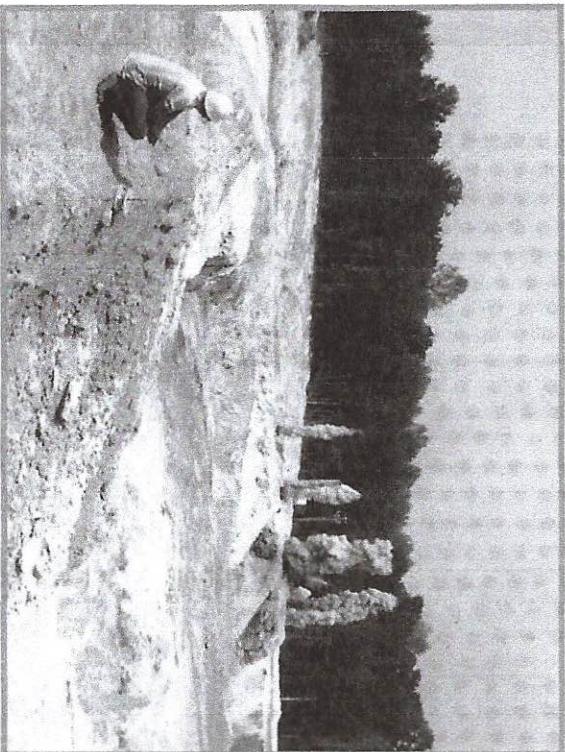
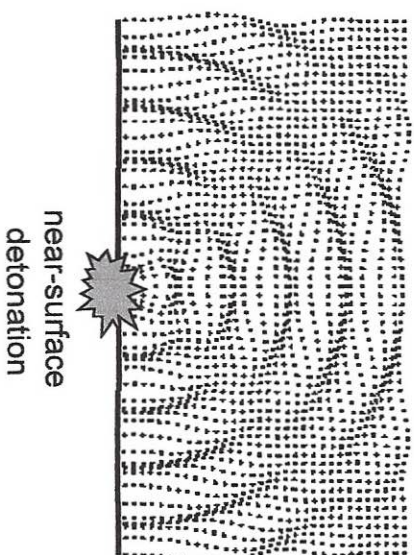
Ground vibrations are measured in terms of **particle velocity** and are reported in inches per second (ips) or the speed at which a particle of soil or rock moves.

At typical blasting distances from residential structures, the ground only moves with displacements equal to the thickness of a piece of writing paper. In terms of displacement, this equates to hundredths of an inch; visually, such movement cannot be detected.

# Airblast

2 Airblast is measured as a pressure in pounds per square  
5 inch (psi) and is often reported in terms of **decibels (dB)**.

Airblast is a pressure wave that that may be audible or in-audible. Elevated airblast levels are generated when explosive energy in the form gases escape from the detonating blast holes. Energy escapes either through the top stemming or through fractures in the rock along the face or at the ground surface.



Airblast radiates outward from the blast site in all directions and can travel long distances. Sound waves travel much slower (1,100 ft/s) than ground vibrations (about 5,000 – 20,000 ft/s). Hence, airblast arrives at offsite structures later than do ground vibrations.

Both ground vibrations and airblast cause structures to shake structures. Occupants in structures that are located far from a blast may experience shaking from vibration and airblast as two separate, closely spaced events. This can be particularly bothersome, as it prolongs the duration of structure shaking and leads the property owner to think that two separate blasts occurred.



# Structure Response

Exhibit 5f

As ground and air vibrations reach a structure, each will cause it to shake. Structure response is dependant on the vibration characteristics (frequency and amplitude) and structure type.

Ground Vibrations enter the house through the basement. This is like shaking the bottom of a flag pole. Movement at the top of the pole depends on how (frequency) and how hard (amplitude) the bottom of the pole is shaken. If shaken at just the right pace, or at the pole's natural frequency, the top will move significantly compared to the bottom. Motion at the top is amplified from the bottom motion.

All blast damage studies have measured incoming ground vibrations at the ground surface. The observed structure amplifications were typically between 1 to 4 times the ground vibration. Structure response below ground level is the same or less than the incoming vibrations

Airblast enters the house through the roof and walls. Like ground vibrations, the frequency and amplitude of the vibrations affect structure response. However the low frequency events (concussion) that most strongly affect structures is normally only a one or two cycle event.

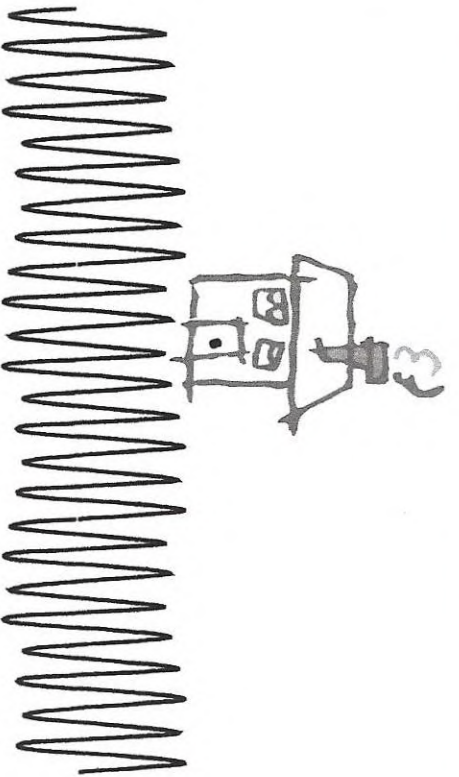
Due to the different arrival times of ground and air vibrations, occupants may feel two distinct impacts on the house.





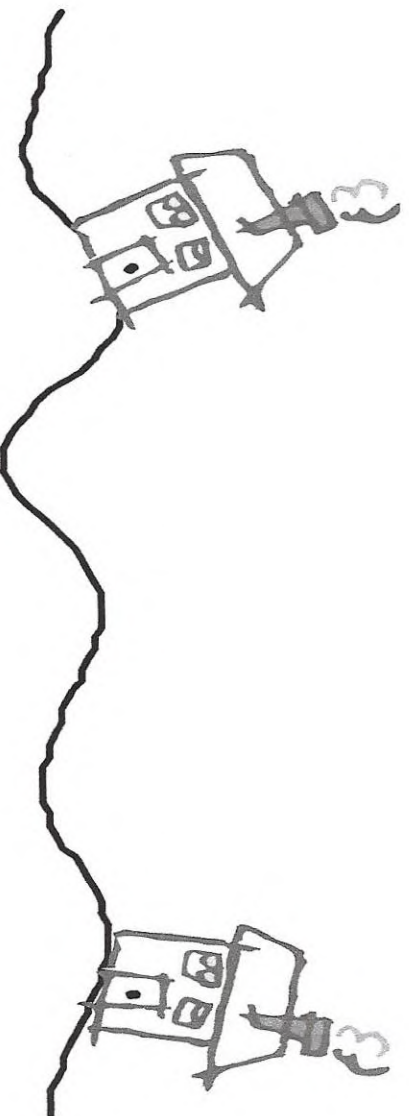
# Ground Vibration Structure Response

Exhibit 59



High frequencies do not promote structure shaking. The length of a single high-frequency wave cycle is short as compared with the dimension of a structure. A structure does not significantly respond to high frequencies.

On the other hand, low-frequency wave cycles are long as compared with the dimensions of structures. Accordingly, low frequencies tend to efficiently couple energy into structures and to promote higher-amplitude, long-duration shaking.



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Harvard Men's Health Watch

## A noisy problem

***People often become more sensitive to noise as they age, which can affect their mental and physical health.***

Published: March, 2019



Image: © Juanmonino/Getty Images

Are you more sensitive to noises than you used to be? Do certain sounds now feel too loud and jarring? Don't worry; it's actually quite normal.

Age-related hearing loss is common among older adults and affects about two-thirds of men in their 70s and 85% of men ages 80 and older. Although it's not clear why, this can also make people hypersensitive to sounds that they used to tolerate easily, which in turn can affect their well-being.

"Exposure to noises from crowds, traffic, and other everyday sounds can become harder to tolerate and increase stress levels, leading to anxiety and a reduction in overall quality of life," says Dr. Stephanie Tompkins, an audiologist with Harvard-affiliated Massachusetts Eye and Ear. "As your sensitivity to noises increases, this can lead to greater isolation, too, as you may try to avoid potentially noisy places and situations."



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Quiet in the Hospital: How Noise...

## Quiet in the Hospital: How Noise Reduction Helps Patients Heal

on June 7, 2018 (<https://medcenterblog.uvmhealth.org/innovations/hospital-noise-reduction/>) in Innovation  
(<https://medcenterblog.uvmhealth.org/category/innovations/>) by UVM Medical Center  
(<https://medcenterblog.uvmhealth.org/author/uvmmedcenter/>)

Noise. It is present in almost every aspect of our lives. From the traffic in the streets, to the fan that provides us white noise in the background to sleep, noise exists. Unfortunately, like stress, too much of it can have a negative impact on a person's health and rest. Some sounds we do like to hear, such as birds chirping, signaling spring in Vermont, but what about sounds in a hospital?

Many of us get admitted to hospitals when we are too sick to take care of ourselves at home. We expect exceptional care from physicians and nurses and, of course, to rest in order to help our bodies heal. We understand that some noises in a hospital are necessary for care; however, others simply aren't.

### The Sounds of a Hospital

Many organizations, including the UVM Medical Center, have high tech equipment, which greatly assists in the delivery of care to our patients, but can also be noisy. Sometimes, healthcare providers are the source of the noise as we interact and communicate with our patients and other health team members.

Another factor is visits from families and friends during visiting hours. It is difficult when one's roommate is trying to rest in the opposite bed. Yet, we need to be cognizant of noise in patient care areas as sounds can be magnified and misinterpreted, increasing agitation and even confusion for some patients.

We become accustomed to the noise; our patients are not.

### The Research on Noise, Quiet, and Healing



Research has shown that noise plays a negative role in healing and that decreasing noise in patient care areas aids in healing processes and helps facilitate speedier recoveries for patients. Patients are able to heal, sleep better and recover more quickly when able to rest. A quieter environment can also help decrease burnout for hospital staff.

Studies show that patients are more likely to develop negative side effects from a noisy hospital, such as sleep disturbances, elevated blood pressure and heart rate, and increased use of pain medications.

Noise can also increase annoyance levels for staff. One study indicated noise, such as talking inside and outside patient rooms, is the most common source of noise as well as visitors' voices, TVs, and behaviors of other patients.

Research concluded that best practices to eliminate noise from talking included staff education about noise reduction, public indicators such as sound monitors, a quiet time protocol, and lower cost environmental fixes, such as fixing noisy doors and squeaky wheels. Lastly, by introducing scripting with routine monitoring, patients' perception of quietness increased and the perception of noise decreased.

## How We Address Noise at the UVM Medical Center

We introduced the "Culture of Quiet" Organizational initiative. The Nursing Professional Governance Patient and Family Experience Global council continued this work. After convening a small task force of nurses and assessing current quiet strategies, we introduced the following tactics:

- Many hospital units have designated 'quiet hours' with automatically dimming of lights at quiet hour intervals.
- Signage is visible in most patient care areas to help keep patients, family, and visitors aware. Throughout the hospital, you will see signs with a relaxing pair of Adirondack chairs and the sun setting with details on when a unit has quiet hours.
- Many semi-private rooms have windows in doors, so doors can be closed allowing for patient rest.
- We offer headphones for TVs and earplugs to help minimize sounds.
- In-patient kits contain a sleeping mask and other comfort items that can be provided at time of admission. Each kit contains a card and explains, 'the best healing occurs in a quiet environment.'
- New education material is available for staff, patients and visitors-just ask to review the next time visiting.
- Some units offer white noise machines, others have this built in.
- Noisy equipment such as wheels and doors can be tagged and replaced.
- Our facility and distribution staff have changed their cleaning and supply delivery schedules to accommodate patient care.
- Healthcare teams within the hospital are focusing efforts to cluster patient care to minimize interruptions to provide restful moments.

## How you can help us.

We ask patients and visitors to hold us accountable when sounds are too loud. We want our community to alert us when noise levels are high and we will do what we can to minimize sound. In turn, we ask that all members of the healthcare team, patients, family, and friends be aware to keep voices soft, cell phones on vibrate, and hold each other accountable for these are the times of the day when our patients take pause to rest and positively impact their healing.

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# Dangerous Decibels: Hospital Noise More Than a Nuisance

By Diane Sparacino, Staff Writer

Imagine a world where hospitals have become so noisy that the annoyance has topped hospital complaints, even more than for the tasteless, Jell-O-laden hospital food (Deardorff, 2011). If you're a nurse, you know that we're already there – with noise levels reaching nearly that of a chainsaw (Garcia, 2012). In fact, for more than five decades, hospital noise has seen a steady rise (ScienceDaily, 2005).

But it wasn't always that way. At one time, hospitals were virtually noise-free like libraries – respected spaces, preserved as quiet zones. The culture was such that a loud visitor might be silenced by a nurse's purposeful glare or sharply delivered "Shhh!" As early as 1859, the importance of maintaining a quiet environment for patients was a topic for discussion. In Florence Nightingale's book, "Notes on Nursing," she described needless noise as "the most cruel absence of care" (Deardorff, 2011).

Fast forward to 1995, when the World Health Organization (WHO) outlined its hospital noise guidelines, suggesting that patient room sound levels not exceed 35 decibels (dB). Yet since 1960, the average daytime hospital noise levels around the world have steadily risen to more than double the





acceptable level (from 57 to 72 dB), with nighttime levels increasing from 42 to 60 dB. WHO found that the issue was not only pervasive, but high noise levels remained fairly consistent across the board, despite the type of hospital (ScienceDaily, 2005).

Researchers at Johns Hopkins University began to look into the noise problem in 2003. They maintained that excessive noise not only hindered the ability for patients to rest, but raised the risk for medical errors. Other studies blamed hospital noise for a possible increase in healing time and a contributing factor in stress-related burnout among healthcare workers (ScienceDaily, 2005).

Technology is, of course, partly to blame. State-of-the-art machines, banks of useful alarms, respirators, generators, powerful ventilation systems and intercoms all add up to a lot of unwanted racket. When human voices are added to the mix, (i.e., staff members being forced to speak loudly over the steady din of medical equipment), it's anything but a restful environment. For the recovering patient in need of sleep, that can be a real issue (Deardorff, 2011).

Contributing to the problem, experts say, are the materials used in hospitals. Because they must be easily sanitized, surfaces cannot be porous where they could harbor disease-causing organisms. Rather than using noise-muffling materials like carpet, acoustic tiles and other soft surfaces, hospitals have traditionally been outfitted using smooth, hard surfaces – especially in patient rooms. Good for cleanliness – not so great for dampening sounds, which tend to bounce around the typical hospital (Deardorff, 2011).

Which brings us to the most recent research, published January 2012 in the *Archives of Internal Medicine*. In the report, Jordan Yoder, BSE, from the Pritzker School of Medicine, University of Chicago, and his colleagues associated elevated noise levels with “clinically significant sleep loss among hospitalized patients,” perhaps causing a delay in their recovery time (Garcia, 2012). During the 155-day study period, researchers examined hospital sound levels. The numbers far exceeded (WHO) recommendations for average hospital-room noise levels, with the peak noise at an average 80.3 dB – nearly as loud as a chainsaw or electric sander (85 dB), and well over the recommended maximum of 40 dB. And while nights tended to be quieter, they were still noisier than recommended allowances, with “a mean maximum sound level of 69.7 dB” (Garcia, 2012).

Perhaps most interestingly, the researchers broke down the sources of noise into categories: “Staff conversation (65%), roommates (54%), alarms (42%), intercoms (39%), and pagers (38%) were the most common sources of noise disruption reported by patients” (Garcia, 2012). “Despite the importance of sleep for recovery, hospital noise may put patients at risk for sleep loss and its associated negative effects,” they wrote. In addition, researchers found that the intensive care and surgical wards had some work to do in dampening noise levels, with ICU peaking at 67 dB and 42 dB for surgical areas. Both far exceeded WHO’s 30 dB patient room recommendation (Garcia, 2012).

Besides patient sleep deprivation, which itself can lead to a multitude of health problems including high blood sugar, high blood pressure and fatigue, studies have reported that elevated noise levels can increase heart and respiratory rates, blood pressure and cortisol levels. Recovery room noise causes patients to request more pain medication, and preterm infants “are at increased risk for hearing loss, abnormal brain and sensory development, and speech and language problems when exposed to prolonged and excessive noise” (Deardorff, 2011).

There is still more research to be done, of course, but Yoder and his colleagues had good news, as well; much of the hospital noise they identified is modifiable, suggesting that hospitals can take steps to successfully create a quieter environment for both patients and healthcare providers (Garcia, 2012).

Around the country, "quiet campaigns" have been launched by hospitals in an attempt to dampen nighttime noise. Besides dimming lights and asking staff to keep their voices down at night, they are working to eliminate overhead paging systems, replace wall and/or floor coverings – even the clang of metal trashcans. Northwestern's Prentice Women's Hospital in Chicago was built with noise reduction in mind, replacing the idea of centralized nursing stations with the advent of smaller, multiple stations (Deardorff, 2011)

Billed as "one of the nation's largest hospital construction projects," Palomar Medical Center in North San Diego County is a state-of-the-art facility that has been designed "to encourage quietness," according to Tina Pope, Palomar Health Service Excellence Manager. Slated to open its doors this August, the hospital will feature a new nursing call system to route calls directly to staff and help eliminate the need for overhead paging, de-centralized nursing stations and clear sig lines, allowing staff to check on patients without having to leave unit doors open. With measures already in place including "Quiet Hospital" badges on staff and posters at the entrance of every unit, a "Quiet at Night" campaign (9 p.m. – 6 a.m.), and a "Quiet Champions" program that encourages staff to report noise problems, Palomar is one of a growing number of hospitals working toward a new era of quiet.

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## Noises Are Truly Horrible For People Who Have PTSD

20 Mar '2018 [Sound](#)

Noise is a really big issue for PTSD survivors: people who have mental health problems because of their traumas. How are they connected?

Almost everybody has experienced a trauma. But some traumas are more scarring than others and can even result in long-lasting mental disorders like **PTSD**, which can have an extreme impact on someone's life. It's a disorder that can develop in the brain after a horrifying experience, like war or a car crash.

### Symptoms

The symptoms of PTSD are, to say the least, not pleasant. They range from nightmares about the traumatic events, disturbing thoughts and feelings, anxiety, trying to avoid anything that has something to do with the traumatic event, and an increase in the fight-or-flight response.

Around ten percent of the population suffers from PTSD, according to data from **NCBI**, a part of the US National Library of Medicine. And, remarkably enough, that percentage is the same for people who suffer from tinnitus (the sound of a constant beep in your ears). The NCBI clearly sees a link between the two.

PTSD survivors also suffer from the Exaggerated Startle Syndrome, with anxiety and actions in an extreme and irrational way too loud noises and bangs. And then there are the sounds that remind them of the sounds during the traumatic events, which can trigger memories of the





## Fear

PTSD can also cause a general fear of sounds: phonophobia, or a fear of some specific sounds: misophonia. Survivors of the disorder also are generally much more sensitive to sounds and perceive them as much louder than other people would.

All of this makes the life of people with PTSD very hard. If you think you are suffering from this, consult your doctor. Really, please do it. For yourself, and for the ones you love.

Do you have PTSD and would you like to tell your experiences to us? We are always very open and interested to hear what you have to say. And again: if you haven't done it yet, visit your doctor, please. Thank you!

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Front Psychol. 2013; 4: 578.

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## Does noise affect learning? A short review on noise effects on cognitive performance in children

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### Abstract

The present paper provides an overview of research concerning both acute and chronic effects of exposure to noise on children's cognitive performance. Experimental studies addressing the impact of acute exposure showed negative effects on speech perception and listening comprehension. These effects are more pronounced in children as compared to adults. Children with language or attention disorders and second-language learners are still more impaired than age-matched controls. Noise-induced disruption was also found for non-auditory tasks, i.e., serial recall of visually presented lists and reading. The impact of chronic exposure to noise was examined in quasi-experimental studies. Indoor noise and reverberation in classroom settings were found to be associated with poorer performance of the children in verbal tasks. Regarding chronic exposure to aircraft noise, studies consistently found that high exposure is associated with lower reading performance. Even though the reported effects are usually small in magnitude, and confounding variables were not always sufficiently controlled, policy makers responsible for noise abatement should be aware of the potential impact of environmental noise on children's development.

**Keywords:** noise, cognitive performance, cognitive development, children, speech perception, listening comprehension, irrelevant sound effect, classroom acoustics



In everyday life, cognitive tasks are often performed in the presence of task-irrelevant environmental noise. Accordingly, numerous studies on noise effects on performance have been conducted since the middle of the 20th century (for reviews see Hellbrück and Liebl, 2007; Szalma and Hancock, 2011), showing that—depending on characteristics of sounds and tasks—noise of low to moderate intensity may in fact evoke substantial impairments in performance.

Most of these studies were conducted with adults. The present review, however, will focus on studies including children. Children are especially vulnerable to harmful effects of environmental noise, as cognitive functions are less automatized and thus more prone to disruption. We will report findings concerning effects of acute noise on performance in concurrent auditory and non-auditory tasks, as well as effects of chronic noise on children's cognitive development.

### Effects of acute noise on children's performance in auditory tasks

Psychoacoustic studies have consistently shown that children's speech perception is more impaired than adults' by unfavorable listening conditions. The ability to recognize speech under conditions of noise or noise combined with reverberation improves until the teenage years (Johnson, 2000; Wightman and Kistler, 2005; Talarico et al., 2007; Neuman et al., 2010). With stationary noise makers, signal-to-noise ratios (SNRs) have to be 5–7 dB higher for young children when compared to adults in order to achieve comparable levels of identification of speech or nonspeech signals, with adult-like performance reached at about 6 years of age (Schneider et al., 1989; Fallon et al., 2000; Werner, 2007). However, with maskers that vary over time, i.e., with trial-by-trial variation of the maskers' spectral composition (Oh et al., 2001; Hall et al., 2005; Leibold and Neff, 2007) or with fluctuating maskers such as single-talker speech (Wightman and Kistler, 2005), adult-like performance is usually not reached before the age of 10 years. Furthermore, children are less able than adults to make use of spectro-temporal and spatial cues for separation of signal and noise (Wightman et al., 2003; Hall et al., 2005). These findings demonstrate that children are especially prone to *informational* masking, i.e., masking that goes beyond energetic masking predicted by filter models of the auditory periphery.

Studies identified a range of linguistic and cognitive factors to be responsible for children's difficulties with speech perception in noise: concerning the former, children are less able than adults to use stored phonological knowledge to reconstruct degraded speech input. This holds for the level of individual phonemes, as children's phoneme categories are less well specified than adults' (Hazan and Barrett, 2000), but also for the lexical level since children's phonological word representations are more holistic and less segmented into phoneme units. Therefore the probability of successfully matching incomplete speech input with stored long-term representations is reduced (Nittrouer, 1996; Metsala, 1997; Mayo et al., 2003). In addition, young children are less able than older children and adults to make use of contextual cues to reconstruct noise-masked words presented in sentential context (Elliott, 1979). Concerning attention, children's immature auditory selective attention skills contribute to their difficulties with speech-in-noise perception. Children's susceptibility to informational masking has been attributed to deficits in focusing attention on auditory channels centered on signal frequencies, while ignoring nonsignal channels (Wightman and Kistler, 2005). Behavioral and ERP measures from dichotic listening paradigms provide evidence that auditory selective attention improves throughout entire childhood (Doyle, 1973; Pearson and Lane, 1991; Coch et al., 2005; Wightman et al., 2010; Gomes et al., 2012).

Owing to the mediating role of linguistic competence and selective attention, children with language or attention disorders are still more impaired than normally developing children by noise in speech perception tasks (Geffner et al., 1996; Ziegler et al., 2005, 2009). A stronger noise effect is also evident for children tested in their second language when compared to native children (Crandell and Smaldino,



# Autism & Anxiety: Parents seek help for extreme reaction to loud noise

September 5, 2018

*Our 12-year-old son has autism, mild intellectual disability and anxiety attacks so severe that we end up in the emergency room. Loud noises are the worst – for example the school fire alarm, thunderstorms, a balloon popping, fireworks. Any help would be greatly appreciated.*



*This week's "Got Questions?" answer is by Judy Reaven, a clinical psychologist and associate professor of psychiatry and pediatrics at the University of Colorado School of Medicine and Children's Hospital Colorado, in Denver. Dr. Reaven's conducted research on the effectiveness of cognitive-behavioral therapy for anxiety in adolescents with autism, with the support of an [Autism Speaks research grant](#).*

***Editor's note: The following information is not meant to diagnose or treat and should not take the place of personal consultation, as appropriate, with a qualified healthcare professional and/or behavioral therapist.***

Thanks for the great question. It certainly sounds like your family is experiencing a very difficult situation. Anxiety symptoms and reactions are very common in individuals with autism spectrum disorder (ASD). They can interfere with functioning across home, community and school settings.

Although your son's reaction sounds more severe than most, many people with autism struggle with a range of fears, phobias and worries. These can range from a debilitating fear of, say, spiders or the dark to chronic anxiety about making mistakes or being late.

Fortunately, recent research suggests that anxiety in children and adults who have autism is quite treatable. Often, these individuals are helped by the same or similar strategies that work well in treating anxiety in the general population.

These approaches include cognitive behavior therapy, or CBT. Cognitive-behavioral approaches are well-established, evidenced-based treatments that have become the gold standard of psychosocial treatments for anxiety. [My own research](#) and that of my colleagues has demonstrated the helpfulness of modifying cognitive-behavioral approaches to address the special needs of those who have autism.

Where to begin?

You describe a number of fears that may be related to sensory sensitivities. I recommend that you begin by consulting an occupational therapist who can assess whether your son's extreme sensitivities to noises are part of a broader sensory processing disorder. If this is the case, and if your son's fears are exclusively triggered by sensory stimuli, then his symptoms may be best addressed by a sensory-focused intervention. Many occupational therapists who specialize in autism receive special training in this area.

It's common for children with ASD and anxiety to become extremely frightened in response to sensory stimuli. Perhaps – like many individuals with autism – your son also has difficulty telling you what's scaring him. Instead, he may show his fear with extreme avoidance of a situation.

For example, he might refuse to go to school after a fire drill. He might become fearful of birthday parties after being frightened by a balloon that popped unexpectedly. Other signs of extreme distress can include yelling, crying, clinging and general agitation. Because your son may have difficulty communicating, it's important to observe his behavior for these signs of distress. This can help you determine what's triggering his fears.

#### Avoidance versus learning to cope

Many parents go to great pains to protect their children by avoiding agitating situations. This approach is sometimes appropriate and even necessary. However, it denies individuals the opportunity to learn how to manage anxiety-provoking situations on their own.

By helping your son learn to manage his fear, you can prepare him for an unpredictable world so that he can participate in it to the maximum extent possible.

Given the severity of your son's anxiety symptoms, I suggest that you seek professional support in addition to the strategies offered here. Families whose children have milder symptoms of anxiety can try these strategies on their own – seeking professional help if symptoms worsen.

#### Tackling one fear at a time

I suggest making a list of your child's major fears and worries. Try to rank order them from mild to severe. To encourage success, I'd start with a mild-to-moderate fear before taking on his extreme reaction to loud noises.

Key components of a cognitive behavioral approach include introducing coping strategies such as deep breathing and "helpful thoughts" that can help a person manage fearful reactions.

For example, you can teach your son to take deep slow breaths to help manage his body's physical anxiety reactions.

"Helpful thoughts" are statements that your son can say to himself when faced with a situation that makes him anxious. For example, you can coach to your son to say, "This is a loud noise. I don't like it, but I can handle it."

To help your son to learn these strategies, I suggest you model taking deep breaths while repeating a "helpful thought" out loud.

#### Graded exposure

The most important step is to help your son face his fears a little at a time. We call this "graded exposure." For example, explain to your son that the two of you are going to listen to a recording of thunder. The first time, you might play the recording at a soft volume, then gradually increase the volume over time as he demonstrates increased comfort with the sounds.

Or you might try watching a video of a balloon pop – perhaps with the volume off the first time. Then he can watch a real balloon pop while standing some distance away. Over time, he can move closer and closer to the balloon.

After such exercises, you can present him with small rewards for being brave and "facing fears." Remember that even a small act of bravery – such as listening to a recording of thunder for 10 seconds – represents an important step toward handling fears. It deserves to be acknowledged.

Although graded exposure may seem counterintuitive, [research](#) indicates that this strategy is the single most effective strategy for getting over a particular fear.

I wish you and your son the very best. Please let us know how you're doing with an email to [GotQuestions@autismspeaks.org](mailto:GotQuestions@autismspeaks.org).

60  
Shares

## Additional Resources & Tools

#### EXPERT OPINION

[Help for Child with  
Autism & Recurring  
Behavioral Crises:  
Part 2](#)

#### EXPERT OPINION

[Parents Seek Help  
for Son with Autism  
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#### EXPERT OPINION


[Parents Seek Help:  
Child with Severe  
Autism Eats Only  
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I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

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**ESTERSON Sarah \* ODOE**

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**From:** Fuji Kreider <fkreider@campblackdog.org>  
**Sent:** Thursday, August 22, 2019 4:41 PM  
**To:** B2H DPOComments \* ODOE  
**Cc:** 'Jim Kreider'; 'lois barry'; 'Irene Gilbert'; 'Charlie Gillis'  
**Subject:** Stop B2H DPO Comment on Boardman to Hemingway  
**Attachments:** STOP B2H Comment-EFSC-8-22-2019.pdf

August 22, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St N.E.  
Salem, OR. 97301

Via EMAIL: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019.

Dear Chair Beyeler and Members of the Council:

The Stop B2H Coalition, Greater Hells Canyon Council, WildLands Defense, (collectively, “Commenters”) have reviewed the Application for Site Certificate (9/28/2018) and Draft Proposed Order (5/22/2019) for the Boardman to Hemingway Transmission Project (B2H), submitted by Idaho Power Company (IPC; or applicant; or developer) and offer the following comments, attached.

Respectfully Submitted,

Fuji Kreider  
B2H Coalition

August 22, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
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Commenters are nonprofit public interest organizations, with a strong interest in responsible energy generation and distribution, protection of public and private lands, in particular those with rare or special qualities and significance, preservation of cultural resources, our lands and heritage, and alignment with carbon reduction goals to enable sustainable adaption to the affects of climate change.

Commenter Stop B2H Coalition (“STOP”) is a nonprofit organization with nearly 700 individual members and 8 organizational members representing thousands of additional individuals. STOP’s mission is to stop the approval and construction of an unneeded 305 mile, 500 kv transmission line through Eastern Oregon and Western Idaho, thereby: protecting environmental, historical and cultural resources; preventing degradation of timber and agricultural lands and the Oregon National Historic Trail; promoting energy conservation and acknowledging the past decade’s revolutionary developments in renewable energy, energy storage and distribution.

Commenter Greater Hells Canyon Council is a member of the Stop B2H Coalition. Greater Hells Canyon Council (GHCC) is a grassroots conservation organization founded in 1967 (as Hells Canyon Preservation Council) to stop Hells Canyon and the Snake River from being dammed. Not only did we stop the dam, our advocacy led to the creation of the Hells Canyon National Recreation Area. Our work now focuses on public lands management in the



entire Greater Hells Canyon Region. We cover such diverse issues as logging, grazing, recreation, mining, species protection, wildlife connectivity, and more. Our mission is to connect, protect, and restore the wild lands, waters, native species and habitats of the Greater Hells Canyon Region, ensuring a legacy of healthy ecosystems for future generations.

Commenter WildLands Defense is a member of the Stop B2H Coalition. WildLands Defense is dedicated to protecting and improving the ecological and aesthetic qualities of the wildlands and wildlife communities of the western United States for present and future generations. WLD does so by fostering the natural enjoyment and appreciation for wildlands habitats and wildlife by means of legal and administrative advocacy, wildland and wildlife monitoring and scientific research, and by supporting and empowering active public engagement.

Organizational and individual members of the Coalition have also submitted comments under their own cover.

For the reasons that follow in the following Sections, we urge the Council to **deny the Request for Site Certificate**.

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# 1. Introduction

*The Oregon Energy Facility Siting Council is responsible for overseeing the development of large electric generating facilities, high voltage transmission lines, gas pipelines, radioactive waste disposal sites, and other projects. State-level oversight of energy facilities helps ensure that Oregon has an adequate energy supply while protecting Oregon's environment and public safety.*

*(Oregon.gov. About the Council, undated]*

The Council's mission, to ensure an adequate energy supply while protecting Oregon's environment and public safety, should not be secondary to the process of reviewing procedures and siting standards.

Ensuring Oregon's energy supply is not an issue. Oregon is looking for markets for its growing renewable energy providers, while neighboring states have similar oversupplies. Even Idaho, slow to acknowledge the benefits of conservation and energy efficiency, now has more power available from renewable resources than its Integrated Resource Plan (IRP) filings have identified as "need" for the B2H.

The Application for Site Certificate (ASC) to construct a 500 kV transmission line across 300 miles of Oregon, spanning five eastern Oregon counties with a 200' clear cut, over 70% of which will impact private lands (100% in Umatilla Co.) Will approval of this project protect Oregon's environment? Quite the contrary. Valuable farm and forest land as well as natural habitats will be sacrificed. Species will be sacrificed and the materials and process of construction pose environmental and safety hazards. Scenic and recreation areas as well as community viewsheds will be negatively affected.

Rugged terrain, difficult for small public service agencies to access, will face dangers of fire, flooding and landslides. Rather than protecting public safety, approving this project will endanger not only open land but residents of bordering communities.

During its deliberations, it is essential that the Energy Facility Siting Council balance its oversight of high voltage transmission lines with the agency's mandate to guard Oregon's environment and public safety from unnecessary and potentially dangerous intrusions.



## 2. Need

**The Boardman to Hemingway (B2H) Transmission Project does not meet the “least-cost plan nor the system reliability” standards of the Oregon Energy Facilities Siting Council.**

Oregon Administrative Rule (OAR) 345-023-0005, “Need Standard For Nongenerating Facilities” states that before EFSC can issue a site certificate for a non-generating facility, the applicant for a site certificate must demonstrate the need for the facility.<sup>1</sup> The Rule further states that “The Applicant (Idaho Power) shall demonstrate need for electric transmission lines under the *least-cost plan rule*, *OAR 345-023-0020*, or the *system reliability rule for transmission lines*, and *OAR 345-023-0030*. We will explain that Idaho Power has failed to meet the Need Standard for the B2H transmission line under either Rule, and that **EFSC cannot find that the this Applicant has met the Need Standard, based upon this Application before the Council.**

### **1. The Applicant, Idaho Power, has not met the standards under EFSC’s Least Cost Plan Rule**

The least-cost plan rule, [OAR 345-023-0020](#), states: (1) The Council shall find that the applicant has demonstrated need for the facility if the *capacity* [emphasis added] of the proposed facility or a facility substantially similar to the proposed facility, as defined by OAR 345-001-0010, is identified for acquisition in the short-term plan of action of “an energy resource plan or combination of plans” adopted, approved or acknowledged by a municipal utility, people’s utility district, electrical cooperative, other governmental body that makes or implements energy policy, or electric transmission system operator that has a governance that is independent of owners and users of the system...”, if the Council finds that the energy resource plan or combination of plans meets specific criteria outlined in the rule.<sup>2</sup> If, however, the plan or plans have been acknowledged by the OPUC, then the plan or plans are deemed to satisfy the specific criteria outlined in the Least Cost Plan Rule and the Council can rely on the OPUC acknowledgement to find that the energy resource plan satisfies the specific criteria outline in the Least Cost Plan Rule.<sup>3</sup>

Idaho Power seeks to meet the requirements in the Least Cost Plan Rule based solely upon a single plan: Idaho Power’s 2017 IRP. There is no dispute that OPUC acknowledged Idaho

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<sup>1</sup> “To issue a site certificate for a facility described in sections (1) through (3), the Council must find that the applicant has demonstrated the need for the facility.”

<sup>2</sup> The criteria are specified in OAR 345-023-0020 (1) (a) through (L).

<sup>3</sup> OAR 345-023-0020 (2) “The Council shall find that a least-cost plan meets the criteria of an energy resource plan described in section (1) if the Public Utility Commission of Oregon has acknowledged the least cost plan.

Power's 2017 IRP<sup>4</sup> and that therefore, Idaho Power's IRP meets that criteria for an energy resource plan under the Least Cost Planning Rule. The facts are, however, that a single energy resource plan that acknowledged a much smaller transmission line does not meet the need standard under the Least Cost Planning Rule.

It is the Council's responsibility in this proceeding to determine whether the applicant has demonstrated the need for the capacity of the facility under the Rule. Idaho Power's acknowledged IRP alone does not meet requirements under the rule, as Idaho Power's IRP only evaluated a transmission line with a fraction (approximately 20%) of the capacity of the B2H transmission line that is the subject of the application for a site certificate.

Idaho Power has requested and received acknowledgement from the OPUC for their 2017 IRP, including B2H Action Items. This acknowledgement is for Idaho Power's share of B2H, a share that represents only approximately 20% of the total capacity of the B2H project at a cost of less than \$300 million, whereas the Applicant, Idaho Power, is requesting that EFSC issue a site certificate for a transmission line with 2,050 MW of capacity at a cost of approximately \$ 1 billion. The sections below from Idaho Power's 2017 IRP distinctly show that only a small amount of the capacity of the B2H facility was acknowledged by the OPUC.

Per the terms of the Joint Permit Funding Agreement (see Appendix D-3 of Idaho Power's 2017 IRP), each co-participant (funder) is assigned a discrete share of the bi-directional capacity of the project on a seasonal basis, as shown in Table 6.2 below.<sup>5</sup> Idaho Power has the smallest share of the project capacity among the three participants in B2H.

**Table 6.2 B2H capacity and permitting cost allocation**

	<b>Idaho Power</b>	<b>BPA</b>	<b>PacifiCorp</b>
Capacity (MW) west to east	350	400	300
	200 winter/500 summer	550 winter/250 summer	
Capacity (MW) east to west	85	97	818
Permitting cost allocation	21%	24%	55%

Source: IPC 2017 IRP p. 62

As can be seen in Table 6.2, Idaho Power's capacity interest is seasonally shaped, as are the capacity shares of all three project participants. The detailed tables below derived directly from Table 6.2 above show that Idaho Power's capacity share is 13.9% of total B2H capacity in the

<sup>4</sup> OPUC Order No. 18 176, May 23, 2018

<sup>5</sup> IPC 2017 IRP p. 62



Winter season and 28.5% of project capacity in the Summer season. Idaho Powers weighted annual capacity allocation is 21.2% of total B2H capacity.

	<b>Winter Capacity Allocation</b>			
	<b>Idaho Power</b>	<b>PacifiCorp</b>	<b>BPA</b>	<b>Project Capacity</b>
	(MW)	(MW)	(MW)	(MW)
West to East	200	300	550	1050
East to West	85	818	97	1000
Participant Shares (MW)	285	1118	647	2050
Participant Shares (%)	13.9%	54.5%	31.6%	100.0%

	<b>Summer Capacity Allocation</b>			
	<b>Idaho Power</b>	<b>PacifiCorp</b>	<b>BPA</b>	<b>Project Capacity</b>
	(MW)	(MW)	(MW)	(MW)
West to East	500	300	250	1050
East to West	85	818	97	1000
Participant Shares (MW)	585	1118	347	2050
Participant Shares (%)	28.5%	54.5%	16.9%	100.0%

	<b>Annual Capacity Allocation</b>			
	<b>Idaho Power</b>	<b>PacifiCorp</b>	<b>BPA</b>	<b>Project Capacity</b>
	(MW)	(MW)	(MW)	(MW)
West to East	350	300	400	1050
East to West	85	818	97	1000
Participant Shares (MW)	435	1118	497	2050
Participant Shares (%)	21.2%	54.5%	24.2%	100.0%

Idaho Powers Cost Inputs and Operating Assumptions from their Supply-Side Resource Data in their 2017 IRP Appendix C Page 73 again demonstrates that their 2017 IRP only evaluated a transmission line that provided 350 MW of eastbound capacity, which is less than 20% of the total capacity of the proposed project.

## Cost Inputs and Operating Assumptions

(All costs in 2017 dollars)

Supply-Side Resources	Plant Capacity (MW)	Plant Capital (\$/kW) <sup>1,3</sup>	Transmission Capital \$/kW	Total Capital \$/kW	Total Investment \$/kW <sup>2</sup>	Fixed O&M \$/kW <sup>3</sup>	Variable O&M \$/kW	Other \$/MWh	Heat Rate Btu/kWh	Economic Life
Biomass Indirect—Anaerobic Digester (35 MW)	35	6,522	144	\$6,666	\$7,133	3	16	0	14,500	30
<b>Boardman to Hemingway (250 MW)</b>	<b>350</b>	<b>0</b>	<b>734</b>	<b>\$734</b>	<b>\$734</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>
Canal Drop Hydro (1 MW)	1	3,753	70	\$3,823	\$4,550	2	0	0	0	75
CCCT (1x1) F Class (300 MW)	300	1,246	98	\$1,344	\$1,574	1	0	0	6,714	30
CCCT (2x1) F Class (550 MW)	550	1,150	109	\$1,259	\$1,471	1	3	0	6,700	30
CHP (35 MW)	35	2,213	35	\$2,248	\$2,406	4	5	0	6,060	40
Demand Response—Additional (25 MW)	25	0	0	\$0	\$0	51	0	0	0	20
Geothermal (30 MW)	35	4,075	144	\$4,819	\$5,342	18	5	0	0	25
Reciprocating Gas Engine (18.8 MW)	18	775	112	\$887	\$945	1	7	0	8,370	40
SCCT—Frame F Class (170 MW)	170	878	117	\$995	\$1,060	1	11	0	10,300	35
Small Modular Nuclear (50 MW)	50	6,126	663	\$6,789	\$10,279	8	2	0	11,493	40
Solar PV—Rooftop C&I (1 MW)	1	2,925	0	\$2,925	\$3,040	1	0	1	0	25
Solar PV—Rooftop Residential (0.005 MW)	0	2,400	0	\$2,400	\$2,495	2	0	1	0	25
Solar PV—Utility Scale 1-Axis Tracking (30 MW)	30	1,375	144	\$1,519	\$1,579	1	0	1	0	25
Storage—Ice Thermal Storage (10 MW)	10	2,000	0	\$2,000	\$2,039	3	0	0	0	20
Storage—Li Battery Residential (10 MW)	10	3,114	0	\$3,114	\$3,175	4	0	0	0	10
Storage—Pumped-Hydro (300 MW)	300	2,352	183	\$2,535	\$3,017	4	0	0	0	50
Storage—V Flow Battery (10 MW)	10	3,736	0	\$3,736	\$3,809	6	0	0	0	10
Storage—Zn Battery (10 MW)	10	2,010	0	\$2,010	\$2,049	3	0	0	0	10
Wind (100 MW)	100	1,475	117	\$1,592	\$1,700	3	0	16	0	25

<sup>1</sup> Plant costs include engineering development costs, generating and ancillary equipment purchase, and installation costs, as well as balance of plant construction.

<sup>2</sup> Total Investment includes capital costs and AFUDC.

<sup>3</sup> Fixed O&M excludes property taxes and insurance (separately calculated within the leveled resource cost analysis)

The Least Cost Plan Rule requires a finding of fact by the Council that the capacity of the proposed resource is identified for acquisition in an energy resource plan or combination of plans. Idaho Power has supported their application with only a single plan that identifies the acquisition of only approximately 20% of the capacity of the proposed B2H line. Idaho Power has not identified a combination of other participants least-cost energy resource plans that would utilize the remaining 80% of the capacity of the project as required per [OAR 345-023-0020](#)(1).

At the April 10, 2018 public meeting at which OPUC acknowledgement of the 2017 was granted Commissioner Bloom clearly stated that he expected the see PacifiCorp's IRP before the OPUC for acknowledgement of B2H. He stated that the action that day was an acknowledgment for Idaho Power and was NOT an acknowledgement for PacifiCorp, a 54% capacity participant of the project. A review of the [video of the final 2017 IRP hearing](#)<sup>6</sup> shows Commissioner Bloom at 4:16:18 say,

“My concerns are that Idaho power is the 24% participant and the two big parties, BPA which we can't control, and PAC doesn't even have it in their IRP. So if we

<sup>6</sup> [https://oregonpuc.granicus.com/MediaPlayer.php?view\\_id=1&clip\\_id=293&meta\\_id=14009](https://oregonpuc.granicus.com/MediaPlayer.php?view_id=1&clip_id=293&meta_id=14009)



acknowledge this IRP for Idaho power this is not an acknowledgement for PAC. They are going to have to do all their own work on this to convince us that it's still in the money.”

Furthermore, an examination of the audio and video record of the April 10, 2018 public meeting clearly shows that the OPUC expressly disclaimed that the Commission’s acknowledgement of Idaho Power’s IRP meets the Council’s requirements for determining the need for B2H under the Council’s Least Cost Planning Rule as explained below.

During the OPUC public meeting on April 10, 2018, at which the OPUC Commissioners entered their decision to acknowledge B2H in Idaho Power’s IRP, counsel for Idaho Power addressed the Commissioner directly and told the Commissioners that Idaho Power hoped that the OPUC acknowledgement of B2H in the 2017 IRP would meet the EFSC standard for demonstrating need for the capacity of the B2H project.

“Idaho Power intends to rely on the Commission’s acknowledgement of the action items regarding B2H to fulfill the need showing that needs to be made at EFSC. The Department of Energy’s plan is to issue their draft proposed order either late this Spring or perhaps as late as late summer but it’s coming up very soon and at that time our hope is that the draft proposed order will reflect the recommendation on the part of the DOE that the need showing is satisfied by this Commission’s Order.”<sup>7</sup>

In direct response to this desire expressed by Idaho Power, Commission Chair Lisa Hardie responded with the following:

“I think it is probably fair to say that we’ll be, as you know, making a decision into our standards and then it, it will be up to EFSC to say how to interpret that. I think people are, what people are arguing is how they view that. We certainly wouldn’t be determining that here.”<sup>8</sup>

Indeed, OPUC issued their formal Order acknowledging the B2H Action Items in Idaho Power’s 2017 IRP expressly disclaiming that the OPUC acknowledgement of the 2017 IRP met any standards of any other State agency.<sup>9</sup> This is clearly expressed in the first paragraph of the OPUC Order which states:

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<sup>7</sup> 2:24:20-2:26

<sup>8</sup> 3:10-3:12

<sup>9</sup> Order No. 18 176, May 23, 2018

“This order memorializes our decision, made and effective at the April 10, 2018 Regular Public Meeting, concerning Idaho Power Company’s 2017 Integrated Resource Plan (IRP). We acknowledge all but two of the action items proposed in Idaho Power’s revised action plan. Although our acknowledgement includes Idaho Power’s Boardman to Hemingway (B2H) related action items, we note that our acknowledgement is limited to our interpretation of IRP standards specific to the Public Utility Commission, and does not interpret or apply the standard of any other state or federal agency.”

It is the Applicant’s responsibility to demonstrate that the 2,050 MW capacity of the proposed B2H transmission line is supported by an acknowledged plan or plans. Idaho Power’s acknowledged IRP supports the need for a much smaller and less costly transmission line than that proposed by the applicant (approximately 20% of the project) and therefore, a demonstration of need has not been made by the applicant under the Least Cost Planning Rule, and EFSC cannot issue a site certificate based upon the evidence contained in this Application.

## **2. The Applicant, Idaho Power, has not met the standards under EFSC’s System Reliability Rule**

The system reliability rule for transmission lines [OAR 345-023-0030](#) (1) states, “The facility is needed to enable the transmission system of which it is to be a part to meet firm capacity demands for electricity or firm annual electricity sales that are reasonably expected to occur within five years of the facility’s proposed in-service date based on weather conditions that have at least a 5 percent chance of occurrence in any year in the area to be served by the facility.”

The DPO at pdf p 532 it states, “The language of OAR 345-023-0030 (Council rules) references that a least-cost plan meets the criteria of an energy resource plan or combination of plans if the OPUC has acknowledged the least-cost plan.” The DPO at pdf p 533 further states, “To demonstrate need for the facility under section (1) of the system reliability rule, an applicant must show that the transmission line is needed to meet the firm capacity demands for electricity or firm annual electricity sales anticipated to occur within five years of the facility’s proposed in-service date based on weather conditions that have at least a five percent chance of occurrence in any year in the area to be served by the facility.

EFSC rules require that the applicant provide specific information in their application if they choose to support the need for B2H under the System Reliability Rule. These specific requirements are stated in OAR 345-021-0010 (1) (n) Exhibit N:

*(F) If the applicant chooses to demonstrate need for a proposed electric transmission line under OAR 345-023-0030, the system reliability rule:*



*(i) Load-resource balance tables for the area to be served by the proposed facility. In the tables, the applicant shall include firm capacity demands and existing and committed firm resources for each of the years from the date of submission of the application to at least five years after the expected in-service date of the facility.*

*(ii) Within the tables described in subparagraph (i), a forecast of firm capacity demands for electricity and firm annual electricity sales for the area to be served by the proposed facility. The applicant shall separate firm capacity demands and firm annual electricity sales into loads of retail customers, system losses, reserve margins and each wholesale contract for firm sale. In the forecast, the applicant shall include a discussion of how the forecast incorporates reductions in firm capacity demand and firm annual electricity sales resulting from:*

*(I) Existing federal, state or local building codes, and equipment standards and conservation programs required by law for the area to be served by the proposed facility;*

*(II) Conservation programs provided by the energy supplier, as defined in OAR 345-001-0010;*

*(III) Conservation that results from responses to price; and*

*(IV) Retail customer fuel choice;*

*(iii) Within the tables described in subparagraph (i), a forecast of existing and committed firm resources used to meet the demands described in subparagraph (ii). The applicant shall include, as existing and committed firm resources, existing generation and transmission facilities, firm contract resources and committed new resources minus expected resource retirements or displacement. In the forecast, the applicant shall list each resource separately.*

*(iv) A discussion of the reasons each resource is being retired or displaced if the forecast described in subparagraph (iii) includes expected retirements or displacements.*

*(v) A discussion of the annual capacity factors assumed for any generating facilities listed in the forecast described in subparagraph (iii).*

*(vi) A discussion of the reliability criteria the applicant uses to demonstrate the proposed facility is needed, considering the load carrying capability of existing transmission system facilities supporting the area to be served by the proposed facility.*

*(vii) A discussion of reasons why the proposed facility is economically reasonable compared to the alternatives described below. In the discussion, the applicant shall include a table showing the amounts of firm capacity and firm annual electricity*

*available from the proposed facility and each alternative and the estimated direct cost, as defined in OAR 345-001-0010, of the proposed facility and each alternative. The applicant shall include documentation of assumptions and calculations supporting the table. The applicant shall evaluate alternatives to construction and operation of the proposed facility that include, but are not limited to:*

- (I) Implementation of cost-effective conservation, peak load management and voluntary customer interruption as a substitute for the proposed facility.*
- (II) Construction and operation of electric generating facilities as a substitute for the proposed facility.*
- (III) Direct use of natural gas, solar or geothermal resources at retail loads as a substitute for use of electricity transmitted by the proposed facility.*
- (IV) Adding standard sized smaller or larger transmission line capacity.*

*(viii) The earliest and latest expected in-service dates of the facility and a discussion of the circumstances of the energy supplier, as defined in OAR 345-001-0010, that determine these dates.*

Although the applicant has submitted information as required above when seeking to establish need under the System Reliability Rule, the applicant has failed to meet the standards required because the information provided relates to a transmission line that has only approximately 20% of the capacity of the B2H line, and the information is provided for only a subset of the area to be served by the proposed transmission line. For example, under requirement (A) above, the applicant is required to submit load-resource balance tables for the area to be served by the proposed facility. The applicant has requested a site certificate for a transmission line with a nominal capacity of 2,050 MW between the Pacific Northwest and the eastern Idaho region. Stated differently, the area served by this transmission line as proposed are the service territories of Bonneville Power and PacifiCorp Western Balancing Authority Area in the Pacific Northwest, and the service territories of Idaho Power and PacifiCorp Eastern Balancing Authority Area in the Intermountain (eastern) region of WECC. Despite the clear requirements of [OAR 345-021-0010](#), Idaho Power has only supported the application with load-resource balance tables that solely identify the loads and resources of Idaho Power.

The monthly average energy load-resource balance values that are submitted with the application are only for Idaho Power's load and resource data. The first page demonstrates that Idaho Power is ONLY talking about their approximately 20% or 500 MW of capacity to meet their "monthly average energy load-resource balance values."



## LOAD AND RESOURCE BALANCE DATA

### Monthly Average Energy Load and Resource Balance

	1/2017	2/2017	3/2017	4/2017	5/2017	6/2017	7/2017	8/2017	9/2017	10/2017	11/2017	12/2017
Load Forecast—including EE	10	11	10	10	12	14	15	15	13	12	11	10
Load Forecast (70th% w/EE)	(1,094)	(1,606)	(1,555)	(1,591)	(1,603)	(2,217)	(2,415)	(2,207)	(1,034)	(1,495)	(1,650)	(1,063)
Adjustment for FF Potential Study Forecast	1	1	1	1	1	1	1	1	1	1	1	1
<b>Net Load Forecast (70th% w/ EE)</b>	<b>(1,893)</b>	<b>(1,685)</b>	<b>(1,554)</b>	<b>(1,590)</b>	<b>(1,802)</b>	<b>(2,216)</b>	<b>(2,414)</b>	<b>(2,206)</b>	<b>(1,834)</b>	<b>(1,494)</b>	<b>(1,649)</b>	<b>(1,862)</b>
Existing Resources												
<b>Total Coal</b>	<b>958</b>	<b>958</b>	<b>926</b>	<b>751</b>	<b>754</b>	<b>958</b>	<b>958</b>	<b>958</b>	<b>958</b>	<b>958</b>	<b>958</b>	<b>958</b>
<b>Total Gas</b>	<b>527</b>	<b>286</b>	<b>280</b>	<b>281</b>	<b>279</b>	<b>511</b>	<b>507</b>	<b>508</b>	<b>277</b>	<b>281</b>	<b>284</b>	<b>527</b>
Hydro (100%)—HCC	582	647	591	729	870	591	536	367	413	442	347	453
Hydro (70th%)—Other	202	214	211	206	318	328	283	212	223	198	182	189
<b>Total Hydro (70th%)</b>	<b>784</b>	<b>861</b>	<b>801</b>	<b>995</b>	<b>1,187</b>	<b>919</b>	<b>819</b>	<b>578</b>	<b>636</b>	<b>640</b>	<b>529</b>	<b>642</b>
<b>CSPP (PURPA)</b>	<b>230</b>	<b>303</b>	<b>328</b>	<b>411</b>	<b>418</b>	<b>414</b>	<b>397</b>	<b>362</b>	<b>334</b>	<b>291</b>	<b>271</b>	<b>247</b>
PPAs												
Elkhorn Valley Wind	35	35	39	35	33	34	36	32	20	30	42	30
Raft River Geothermal	10	10	9	9	7	8	8	7	9	9	10	10
Neal Hot Springs Geothermal	25	25	23	20	16	15	12	13	16	17	23	25
Clatskanie Exchange—Take	5	6	7	9	10	11	10	7	4	1	3	4
Clatskanie Exchange—Return	0	0	(20)	(20)	0	0	0	0	0	(20)	(20)	0
<b>Total PPAs</b>	<b>75</b>	<b>75</b>	<b>58</b>	<b>53</b>	<b>65</b>	<b>68</b>	<b>66</b>	<b>59</b>	<b>58</b>	<b>37</b>	<b>57</b>	<b>77</b>
<b>Transmission Capacity available for Market Purchases</b>	<b>203</b>	<b>245</b>	<b>320</b>	<b>285</b>	<b>222</b>	<b>399</b>	<b>313</b>	<b>335</b>	<b>175</b>	<b>290</b>	<b>237</b>	<b>182</b>
<b>Existing Resource Subtotal</b>	<b>2,777</b>	<b>2,728</b>	<b>2,713</b>	<b>2,776</b>	<b>2,925</b>	<b>3,268</b>	<b>3,060</b>	<b>2,801</b>	<b>2,439</b>	<b>2,496</b>	<b>2,335</b>	<b>2,634</b>
<b>Monthly Surplus/Deficit</b>	<b>884</b>	<b>1,043</b>	<b>1,159</b>	<b>1,186</b>	<b>1,123</b>	<b>1,052</b>	<b>646</b>	<b>595</b>	<b>605</b>	<b>1,002</b>	<b>685</b>	<b>772</b>
2017 IRP Resources												
2026 Boardman to Hemingway Transmission	0	0	0	0	0	0	0	0	0	0	0	0
2033 Combined Cycle Combustion Turbine	0	0	0	0	0	0	0	0	0	0	0	0
2030s Reciprocating Gas Engines	0	0	0	0	0	0	0	0	0	0	0	0
<b>New Resource Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Monthly Surplus/Deficit</b>	<b>884</b>	<b>1,043</b>	<b>1,159</b>	<b>1,186</b>	<b>1,123</b>	<b>1,052</b>	<b>646</b>	<b>595</b>	<b>605</b>	<b>1,002</b>	<b>685</b>	<b>772</b>

The monthly peak hour load-resource balance values are reported confirm again that Idaho Power is ONLY talking about their approximately 20% or 500 MW of capacity in the project to meet “monthly peak hour load-resource balance values” of the project.

## Peak-Hour Load and Resource Balance

	1/2017	2/2017	3/2017	4/2017	5/2017	6/2017	7/2017	8/2017	9/2017	10/2017	11/2017	12/2017
<b>Load Forecast (95<sup>th</sup>% w/no DSM)</b>	(2,440)	(2,357)	(2,078)	(2,032)	(2,702)	(3,444)	(3,605)	(3,266)	(2,801)	(2,105)	(2,315)	(2,620)
Load Forecast—including EE	9	9	11	12	16	13	18	18	20	15	8	9
Load Forecast (95 <sup>th</sup> % w/DSM and EE)	(2,441)	(2,358)	(2,067)	(2,020)	(2,686)	(3,431)	(3,586)	(3,248)	(2,781)	(2,091)	(2,307)	(2,611)
Adjustment for EE Potential Study Forecast	1	1	1	1	1	1	1	1	1	1	1	1
Existing Demand Response	0	0	0	0	0	390	390	337	0	0	0	0
<b>Peak-Hour Forecast w/DSM and EE</b>	(2,440)	(2,357)	(2,066)	(2,019)	(2,685)	(3,040)	(3,195)	(2,910)	(2,780)	(2,090)	(2,307)	(2,611)
<b>Existing Resources</b>												
<b>Total Coal</b>	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020
<b>Total Gas</b>	716	716	716	716	716	716	716	716	716	716	716	716
Hydro (90 <sup>th</sup> %)—HCC	950	900	950	850	1,050	1,000	1,000	800	750	750	650	900
Hydro (90 <sup>th</sup> %)—Other	190	195	172	203	291	301	285	208	215	197	185	189
<b>Total Hydro (90<sup>th</sup>%)</b>	1,140	1,095	1,122	1,053	1,341	1,301	1,285	1,008	965	947	835	1,089
<b>CSPP (PURPA)</b>	66	69	152	194	234	311	314	307	210	174	151	68
<b>PPAs</b>												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	9	9	7	8	8	7	9	9	10	10
Neal Hot Springs Geothermal	25	25	23	20	16	15	12	13	16	17	23	25
Clatskanie Exchange—Take	5	6	7	9	10	11	10	7	4	1	3	4
Clatskanie Exchange—Return	0	0	(20)	(20)	0	0	0	0	0	(20)	(20)	0
<b>Total PPAs</b>	45	46	23	23	38	33	35	32	34	12	21	43
<b>Transmission Capacity Available for Market Purchases</b>	203	245	320	285	222	399	313	335	175	290	237	182
<b>Existing Resource Subtotal</b>	3,190	3,190	3,354	3,291	3,571	3,785	3,684	3,420	3,120	3,160	2,979	3,119
<b>Monthly Deficit</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>2017 IRP Resources</b>												
2026 Boardman to Hemingway Transmission	0	0	0	0	0	0	0	0	0	0	0	0
2033 Combined Cycle Combustion Turbine	0	0	0	0	0	0	0	0	0	0	0	0
2030s Reciprocating Gas Engine	0	0	0	0	0	0	0	0	0	0	0	0
<b>New Resource Subtotal</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>Monthly Deficit</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>Monthly Surplus/Deficit</b>	750	833	1,288	1,272	886	745	489	510	340	1,070	672	508

### Idaho Power does not meet the system reliability rule for the project.

Idaho Power's monthly average energy load-resource balance values and the monthly peak hour load-resource balance values have demonstrated the need for less than 25% of the service area of the B2H project. The remaining information provided by the applicant under the System Reliability Rule suffers from the same infirmities. The site certificate requested is for a transmission line with a nominal 2,050MW of capacity, yet the information provided by the applicant supporting the project need under the System Reliability rule is for a small sub-area of the total service area to be served by the project and for a sub-area served by less than 25% of the capacity of the project . **The applicant has clearly not met the EFSC requirement for demonstration of need under either the Least-Cost Planning Rule or the System Reliability Rule and must be denied.**

### 3. Conclusion

EFSC has erred in its Findings Of Fact<sup>10</sup> concerning the applicants attempts to meet Council's Need For Facilities standard. For each and all of the reasons enumerated, Idaho Power has not

<sup>10</sup> Draft Project Order p 522-529

met the least-cost plan rule, OAR 345-023-0020, or the system reliability rule for transmission lines, OAR 345-023-0030. Nor has Idaho Power filed a complete application, as required by OAR 345-021-0010(1)(n)B(i). The *full* capacity of the proposed facility *has not been* identified for acquisition in the short-term plan of action of an energy resource plan, nor **in a** combination of adopted plans. In light of that situation, the **site certificate should not be approved.**



### 3. Notification

**The Oregon Department of Energy (ODOE) unlawfully amended its rules on noise notification; the notification process must start again.**

EFSC improperly modified the noise notification area, from 1 mile to ½ mile, in its Project Order. This reduction of the noise notification area is irresponsible and improper. A transmission line of this size and magnitude will be an ugly and noisy neighbor with an impact much boarder than a mile. The intent of the 1 mile notification is to ensure that the public is notified about energy facilities that would impact their lives. This rule change was done improperly and thus the notification done is invalid. Notice needs to be redone to include all owners of noise sensitive property within one mile of the proposed site boundary.

In Exhibit X at pdf p 8 in 2.3 Second Amended Project Order Provisions it states, The Second Amended Project Order includes the following provisions regarding Exhibit X:

*All paragraphs [of OAR 345-021-0010(1)(x)] apply. However, because of the linear nature of the proposed facility, the requirements of paragraph E are modified. Instead of one mile, to comply with paragraph E the applicant must develop a list of all owners of noise sensitive property, as defined in OAR 340-035-10 0015, within one-half mile of the proposed site boundary.*

There is no valid basis that we can find, for EFSC to use a Project Order to modify and existing Notice requirement in an adopted Rule. EFSC has not cited any authority for its assertion in the Project Order that a reduction of the notice area is allowed. Instead the Order just states that a reduction is authorized. That is neither legal, nor appropriate.

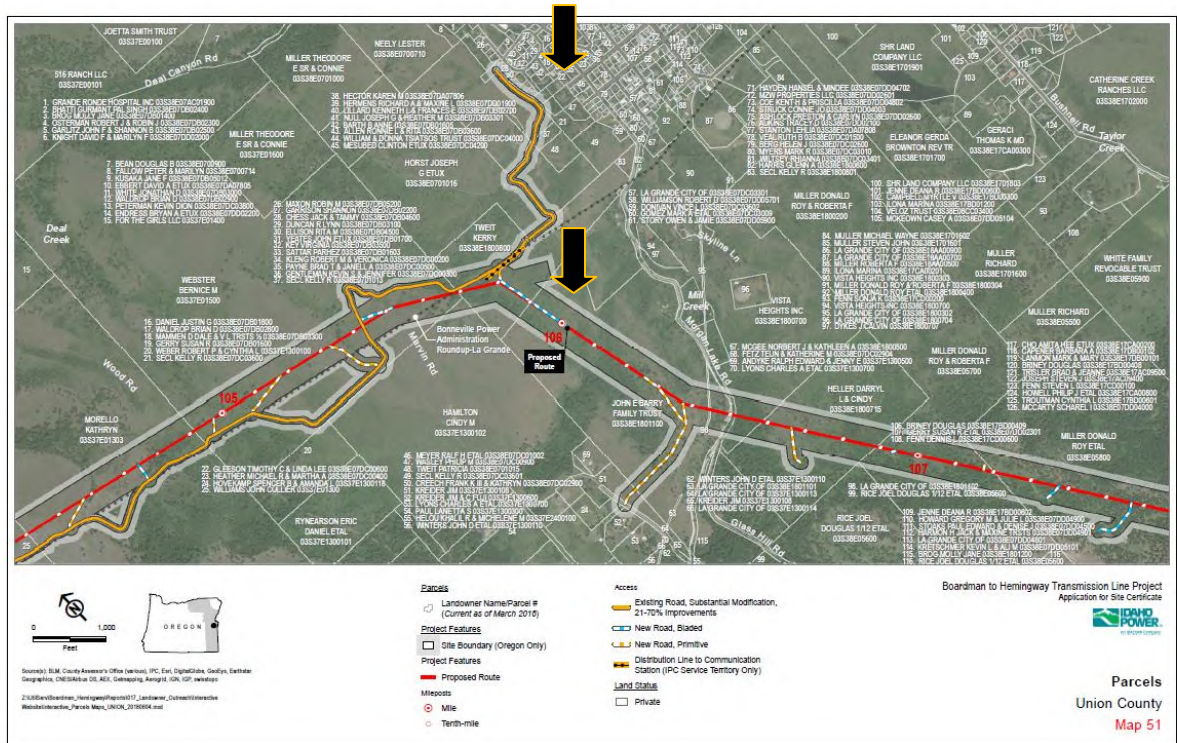
The 1-mile notice list is required by a Rule. To amend or modify an adopted Rule, EFSC (like any other agency) must follow the procedures set out in ORS 183.335 and OAR 345-001-0000(1). That was not done. Instead, the Project Order purports to amend or modify the Notice rule, as an administrative act by the agency. That type of amendment is not lawful.

**For there to be lawful Notice in conformance with the rules, EFSC should insist that the applicant provide a list of all owners of noise sensitive property within 1 mile of all edges of the proposed site boundary, notify them properly – and then re-open the comment period on this project.**

## Case in point regarding non-compliant Noise Notification

Under the current incorrect rule of a .5 mile, notice was still not properly given to landowners at the terminus of the site boundary on Hawthorne Drive in La Grande.

In the map below, the arrow at the top of the map points to Hawthorne Drive where the site boundary ends. The second arrow points to where the access road boundary meets the transmission line boundary at an approximately 45 degree turn in the transmission corridor.



The Google earth map below shows ½ mile circles radiating out from the arrows above. The red circle on the right is drawn at the intersection of the site boundary at Hawthorne Dr and represents landowners within ½ mile of that site boundary. These landowners have not been notified. The red circle on left is drawn where the transmission corridor turns south and represents the ½ zone that was notified.



It is very clear that many of the landowners in La Grande that will be significantly impacted by the project have not been notified per the rule requirements. Of special concern in La Grande, is the neighborhood at the intersection of site boundary at Hawthorn Dr. This neighborhood and its infrastructure are ill-equipped to deal with the construction traffic that will invade their quite residential neighborhood and they have written many comments to express this (see Attachment 9.1 in our Section 9. Wildfire and Public Safety demonstrate.) There are other less invasive routes for Idaho Power to access their project in this area. Attacking this neighborhood as a transportation corridor to gain access to the site is inappropriate and plainly, stupid. We hope ODOE-EFCC will agree and protect this neighborhood and terminate site access from this neighborhood.

In conclusion, the Energy Facility Siting Council needs to **deny** Idaho Power's application for the B2H transmission project due to the fact that the application **violates several OARs, including 345-001-0010(55) (clear mapping), 345-021-0010(1)(x)(E) (notification of noise sensitive property owners), and ORS 183.335 and OAR 345-001-0000(1) (modification of adopted rules by an agency).** Or, the Council should direct the applicant to **reinitiate the notification process and begin again.**



## 4. Noise

**Because Idaho Power cannot comply with the State DEQ Ambient Noise Rules/Standards, the project is “unpermittable.” (p. X-1.) The Council cannot grant a variance of these noise standards because the violations are too prevalent throughout the ASC, and adherence to these standards are “black and white” (LUBA case number 2011-014.)**

**Because Idaho Power fails to comply with noise notification requirements and the ODOE is unlawful in amending and applying its rules regarding this notification.**

### 1. Notification

The notification requirement was addressed in the section above. However, more specifically, by arbitrarily reducing the size and locations of the site boundary, Idaho Power, by design:

- Limited the notifications to citizens/residents within and near the site boundary in violation of OAR 345-021-0010 noise notification requirement (see above, 1. Notification.)
- Reduced the number of potential NSRs that needed to be monitored for baseline in violation of OAR 340-035-0035 and the “Sound Measurement Procedures Manual 1” (NPCS-1.)
- Caused a mis-representation to numerous land owners, who have not been informed and whose quality of life will be severely compromised.
- Disregarded residents who may experience health problems (ORS 467.010) and other issues that sound will exasperate, the latter needing special care with mitigation.

The Oregon Department of Energy should issue another Project Order that requires an expansion of the noise monitoring and notification area to align with the project boundary and forces the developer to comply with OAR 345-021-0010(1)(x)(E): the application must include “*a list of names and addresses of all owners of noise sensitive property . . . **within one mile** of the proposed site boundary.*” (*emphasis added*).

**For there to be lawful Notice in conformance with the rules, EFSC should insist that the applicant provide a list of all owners of noise sensitive property within 1 mile of all edges of the proposed site boundary – and then re-open the comment period on this project.**

### 2. Two Types of Compliance

Section IV.Q.1. of the Draft Proposed Order (DPO) explains the Noise Control Regulations (beginning on p. 546.) In the DPO the Oregon Department of Energy (ODOE) correctly defines the proposed project as an unused or “new industrial and commercial noise source;” therefore, it must comply with two standards: the “ambient antidegradation standard” and the “maximum allowable noise standard.” (p.547)

On page 551 of the DPO, ODOE states that because the maximum L50 sound levels would be less than the “Table 8” maximum allowable sound level, and that the proposed facility would be in compliance with the maximum allowable sound level standard identified in OAR 340-035-100035(1)(b)(B)(i).

The developer also appears to comply with the maximum allowable noise standard, per Table NC-2 on page 547 of the DPO, since construction and maintenance noise is apparently exempt from these rules. However, it is apparent in the following discussion, the operations standards with regard to the **ambient antidegradation standard** (hereinafter referred to as “ambient noise standard, noise standard or ambient standard”) **cannot comply with state rules and standards and therefore a site certificate cannot be issued.**

If a site certificate were to be approved, a condition must include compliance with all local noise standards. State statute 467.100: *local regulation of noise sources; exemption from state enforcement* rules, that a city or county may adopt and enforce noise ordinances or noise standards otherwise permitted by law. These local standards must be at least as restrictive as state standards and they can go higher. A city or county may also adopt such standards for a class of activity exempted by the commission or noise emission sources not regulated by the commission, for example: construction noise (see below, Attachment 4.1. regarding construction noise in an urban area.)

The city of La Grande has a much stricter noise standard than the state one. It basically says that noise can not disturb people in their homes; this includes but is not limited to avoiding weekends and time frames for construction. The transmission line would be close enough to a significant number of La Grande homes and therefore inevitably it would exceed this standard.

Therefore, a **condition must be stated clearly, if a site certificate is granted, that all construction noise must conform to regulations of the local jurisdictions** (e.g.: cities and counties.)

### 3. Ambient Noise Standard

The remaining comments and discussion apply to the ambient noise standard within OAR 340-035-0035. **It is stated clearly in the Introduction to the Noise Section of the ASC, Exhibit X, p.X-1, that the project cannot comply with this state standard.** On p. X-1, Idaho Power “requests that the Council grant a variance on the basis that requiring the Project to strictly comply with the ODEQ Noise Rules is unreasonable and likely to make the Project unpermittable.”

Numerous pages of attempted justification for this variance and exemption still do not bring the project into compliance. There are errors in the baseline establishment and monitoring, as well as the modeling methods used to predict impacts. Furthermore, Idaho Power attempts to use other methods for arriving at compliance (Big Eddy Knight EIS, USDOE, etc.) However, the applicant cannot meet the State of Oregon’s ambient noise standard—Period! Therefore, the **project cannot move forward without the developer re-doing their methods for baseline monitoring and impact modeling** measures in a way that meets the state standards and follows the ODEQ Sound Measurement Procedures Manual (NPCS 1.) Once this study has been corrected and conducted, including appropriate notification, the **developer could reapply for the site certificate,** as stated above.

### **A. Establishing Baseline: Not Compliant with ODEQ rules and standards**

The noise rules do not require noise monitoring to establish the baseline measure. The rules and the Manual (NPCS1) do state the methods that are to be used to establish baseline noise levels in the event the developer chooses to do actual noise measurements. The developer had the option: a) use the standard assumed 26 dBA for any noise sensitive property; or, b) monitor the noise sensitive properties per the ODEQ Manual, to establish the baseline. (OAR Chapter 340, Division 35.)

The only monitoring results which should have been used to establish a baseline noise level other than the standard 26dBA, should have been the 22 measuring points (MP) which performed during the monitoring period, assuming they were placed at a time and location as described in OAR 340-035-0035(3)(b). Locations where baseline modeling was not completed per the DEQ protocol need to use the assumed baseline sound measurement of 26dBA. Instead, the developer used the measurements from one residence (aka Noise Sensitive Property, NSP or Noise Sensitive Receptor, NSR) to establish what they assumed it would be at another, in some cases they averaged the measure and in other cases they used one NSR measure as representative for another NSR.

Monitoring of noise to establish baseline noise levels failed to comply with the requirements of OAR 340-035-0035(3)(b). This rule establishes the location and procedure for completing sound measurements as listed in the Sound Measurement Procedures Manual 1. The location is specifically described as the further point from the noise source between a point 25 feet toward the noise source from the noise sensitive building or the point on the property line nearest the noise source.

Idaho Power ignored the specific procedural requirements for establishing a baseline noise level in several ways:

1. The practice of using a baseline sound measurement at a single monitoring point to represent a group of nearby noise sensitive properties is unacceptable. The developer stated that due to the large number of NSR's identified within the analysis area, it was not feasible to conduct baseline monitoring at every individual noise sensitive property. (Page 5, Line 36.) This is why a standard baseline exists. They could have simply followed the ODEQ standard and used 26dBA as a baseline.
2. They placed measuring points "representative of the house and yard accommodations." Measuring points were placed "in similar surroundings experiencing the same weather and acoustic conditions of where a resident was expected to spend the majority of time when outdoors" or they were placed to accommodate the homeowner's request. See 3.2, Page 7 of Baseline Sound Survey. The procedure for noise monitoring to establish baseline very specifically defines where the monitoring equipment is to be placed in relation to the noise sensitive property. The applicant failed to follow the procedure as outlined by DEQ's procedure manual NPCS 1 which includes specific information and diagrams of the locations where noise monitoring should have occurred.
3. The developer used the measurements from one residence to establish what they thought it would be at another. For example, they averaged the results from MP 13 and MP 16 to guess at the measurement at MP 15. These MP's were located roughly 5 miles in different directions from MP 13



and MP 16. And in some instances, the equipment malfunctioned at MP 13. See description on page 8, lines 17 through 26, in the Baseline Sound Survey, for an example of the methods used to complete the monitoring which clearly would not hold up under peer review.

4. On page 7 of the “Supplemental Baseline Sound Survey for the Tub Mountain, Burnt River, and East of Bombing Range Road Alternate Corridors, the developer states, “MP’s were placed in similar surroundings experiencing the same weather and acoustic conditions to where a resident was expected to spend the majority of time when outdoors. However, some property owners voiced opinions and preferences on the exact locations of the MP on their properties.” No reliable results can be obtained when the individual(s) doing the monitoring do not adhere to the strict protocol used to complete the monitoring.
5. Worse is the attempt at placing 63 NSP into one group, with one measurement point (MP11), miles from the NSRs. This is completely non-compliant! Idaho Power attempts to claim that they had approval of this method from the ODOE staff (see memo, ODOE’s Max Wood with David Stanish of Idaho Power, in Attachment X-6) however, Mr. Wood clearly states that he cannot approve such a change in methods.

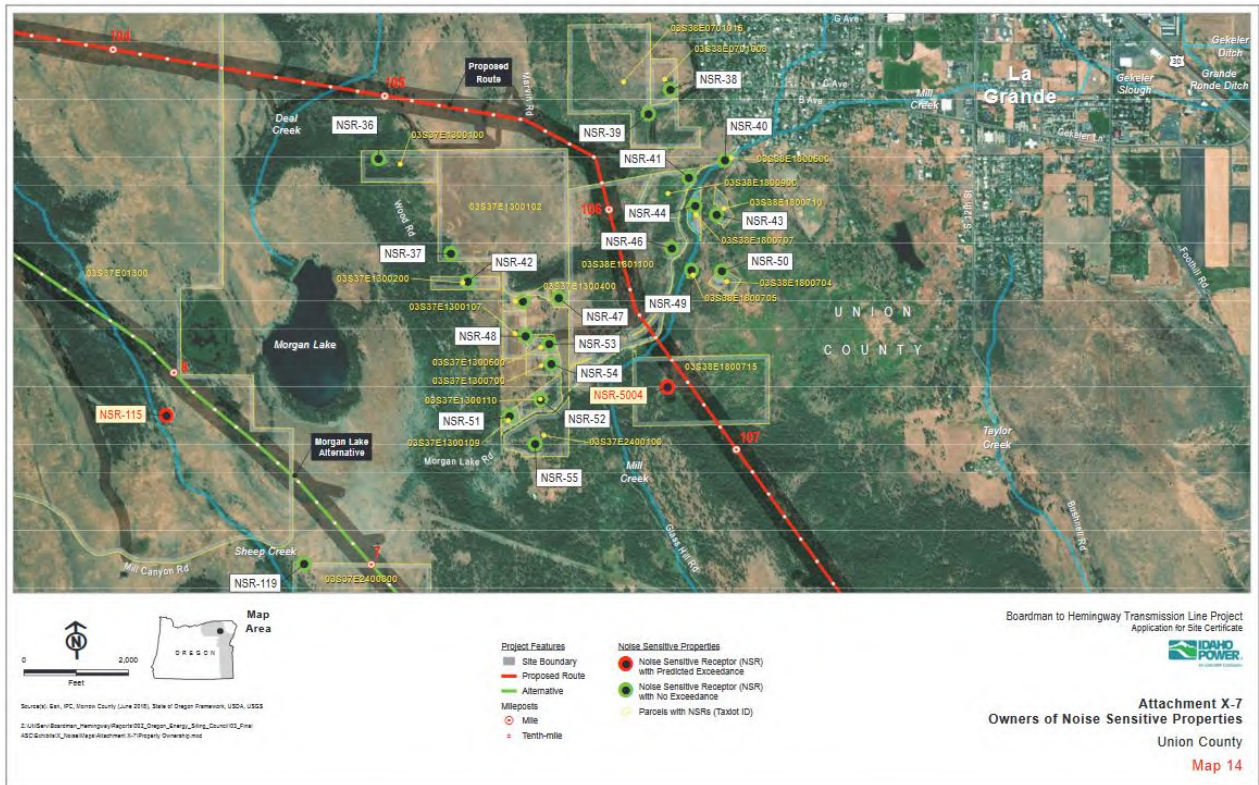
“I would like to be clear with a similar caveat as we provided on the roads guidance document, ODOE doesn’t necessarily “approve” the use of these MPs as baseline data for the NSRs, and should it be challenged during the contested case it would ultimately be up to EFSC to make a decision on compliance with the noise regulations.”

His comment is a response to a question from Idaho Power about changing the monitoring methods.

IP, in their self-serving justification claimed that there are “too many” NSRs. They went ahead anyway and attributed noise measurements at a single location to multiple other noise sensitive properties where measurement did not occur based upon a subjective evaluation that the terrain was similar or they were in the reviewers estimation close to the property that was actually measured. For example, the measurement for MP 11 was used to establish baseline noise level for a total of 63 noise sensitive properties according to Table 1 listing.” Monitoring Points representing Noise Sensitive Receptors”, Page 2 of the “Technical Memorandum, Ch2M dated April 29, 2016.” Monitoring Position 11 is 207 feet from the Union Pacific Railroad. This alone should preclude any determination that it is consistent with the other locations which do not have railroad traffic located this near to them. It invalidates all results from the Monitoring Position 11 being used as the baseline noise measurement applied to other noise sensitive receptors.

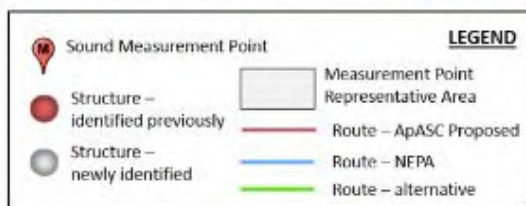
In Attachment X-4 and Attachment X-6, it becomes very clear that the entire Morgan Lake and Mill Creek areas in Union County are out-of-compliance and need to be either re-done or the standard ambient noise baseline used. Not only is the distance of MP 11 outside of the “25 feet from the source,” but the “representative conditions” are completely unrepresentative.

The image below shows some of the NSRs being assigned to MP11



This next image is the cone shape graphic for MP11 with red dots for NSRs. However, the lines and colors for the routes in this diagram (below) are outdated or in error, since the actual NEPA route is not the blue line. That route is much further west and not a part of this image at all. Regardless, the MP and the NSRs seem accurate according to the methodology described.

B2H Preliminary: Morgan Lake and Mill Creek Alternatives  
Overall view of MP11, MP13, and MP14





6. The Draft Proposed Order on page 549, line 16 through 24 concurs that the monitoring positions for baseline were “representative baseline sound measurements.” However, the DPO continues as IF the baseline was done correctly. There is no mention of DEQ requirements for the location of the Monitoring Points (MP). In fact, changing the measurement point, or using measurements from one residence to assume sound level at others makes all the measurements that were not performed at the stated location for each residence invalid.
7. There are Noise impacts in Recreation and Protected Areas as well but IPC has not addressed these adequately. Morgan Lake Park, in Union County, was not monitored because it was not a “residence.” However, according to the rules, a Noise Sensitive property is: “...real property normally used for sleeping, or normally used as schools, churches, hospitals or public libraries...” (340-035-0015 (38). Morgan Lake is a quiet, pristine campground – with overnight camping -- where people sleep! Plus it is a scenic and important recreation area and should have been designated as a NSR also, per OAR 345-022-0100 and ODEQ standards 340-035-0000-0100. (see Attachment 4.2: [Non-compliance with Noise Standards in Recreation Area.](#))

In Baker County, no measurements were done at the Oregon Trail Interpretive Center viewpoint or walking trails endpoint near milepost 146. Perhaps not a “Noise Sensitive Property,” in the context of residential sleeping areas (similar to the Morgan Lake example above); however, certainly for tourists and visitors to OTIC and its hiking trails, noise will be disturbing. Map 23 in Attachment X-1 does not even show the Oregon Trail. Within OAR 345-022-0040 Protected Areas and ODEQ standards 340-035-0000-0100, this area should have been monitored and modeled as a Noise Sensitive Property and was not.

While the developer makes several references to other methodologies, they are irrelevant if they cannot first comply with the state standards of the DEQ, plain and simple. Idaho Power failed to follow the methodology for establishing a baseline noise level required by OAR 340-035-0035 or use the assumed baseline noise level which resulted in the establishment of numerous flawed baseline noise levels. As a result, none of the results of the noise modeling for baseline measures can be assumed to be accurate. All material needs to be corrected and resubmitted. No site certificate can be issued due to the lack of compliance and validity of the noise monitoring protocol.

#### **B. Predicted Exceedances: Attachment X-4 Tabulated Summary of Acoustic Modeling Results by Receptor location**

If Idaho Power and the ODOE follow the rules as stipulated by ODEQ, the predicted noise increase from this proposed transmission line will be shown to exceed state standards. This could affect the health and safety of numerous citizens, as well as wildlife, across five counties in Eastern Oregon. It will most certainly create a continuing nuisance and it will reduce property values.

1. If IPC used the required DEQ baseline of 26 dBA the number of exceedances would be far greater than what Idaho Power is spending hundreds of pages trying to justify. The truth is that they cannot meet the standard. In Exhibit X of the application, [Attachments X-4](#), X-5, X-6 and X-7, we have been able to piece together (but with limited exact references because reference numbers are not used consistently) that 45 residences/NSRs will exceed the noise standard for the proposed Mill Creek

route, and 19 will exceed the noise standard for the Morgan Lake Alternative. This is calculated by using the regulatory standard of 26 dBA for baseline, not the incorrect representative measure of 32dBA that Idaho Power is attempting to use without following the DEQ Manual NPC51 methods for baseline monitoring.

2. Using the applicant's non-compliant methods for monitoring, Attachment X-4 of the application shows that Noise Sensitive Property Number 7, 119 and 132 all are modeled at +10 and therefore should be included as exceeding the L50 standard. The applicant only included those at +11 and above. So the number of exceedance is under-reported; the number should be (at least) 39 properties exceeding the standard.
3. If the 26 dBA baseline standard is applied, as it should have been for all NSRs, except the 22 locations where assumed, compliant, monitoring did occur, then the noise exceedances would be at least 84 residences. (This is conservatively estimated: 36 exceedances already identified by IPC and in the DPO + 45 exceedances in just one example from one route in Union Co = 81 + the 3 not counted in previous paragraph = 84 residences.) This is clearly unacceptable! **There is no valid process for ODOE and EFSC to authorize a variance to the ODEQ noise standards.**

**The site certificate MUST be denied. The negative impacts to citizens, the economy, and the resources of this state far exceed any benefits it could provide.**

### **C. Modeling: Total Noise Has Not Been Modeled**

The Department and Council cannot issue a site certificate until all information is provided to assess noise impacts of the complete development or site boundary. The next step after establishing the baseline ambient measure was to "model" the noise impacts.

1. If the Oregon Department of Energy were to go through a properly noticed Rulemaking, under the Oregon Administrative Procedures Act (APA). (See, ORS 183.335 and OAR 345-001-0000(1)) and were to prevail and change the noise notification rule to ½ mile, the developer, the Oregon Department of Energy and the Energy Facility Siting Council will **still be out of compliance with state law ORS 467.020** for the following reason:

One half mile is 2640 feet. The noise monitoring provided by Idaho Power, Attachment X-4. Tabulated Summary of Acoustic Modeling Results by Receptor Location, predicts that there are residences beyond ½ mile from the development which exceed the noise standard. These noise sensitive properties are not being included in the study.

2. When modeling results showed a "potential for increasing sound levels by 10 dBA or less," the developer assumed compliance with the ambient degradation standard and did not complete testing to determine baseline sound levels. This did not provide for any margin of error as any level over 10 dBA would be an exceedance of the standard. The developer failed to apply a reasonable margin of error, which would have resulted in doing measurements for any residence

predicted to have an increased sound level of 8 dBA to allow for a 95% reliability. (Page 5 of Baseline Sound Survey, Line 24.)

3. The application does not include modeling for all noise sensitive properties within ½ mile (or mile) of the site boundary. This information is specifically requested on p. 21 of the Second Amended Project Order and is required by OAR 345-021-0010(1)(x). The modeling was only completed for the area adjacent to the transmission line right of way. There is no evaluation of noise impacts at many access roads and at areas such as lay down and multi-use areas, which are not directly connected to the right of way; however they are part of the site boundary and must be modeled, and if used for baseline, monitored as well. On pages 22 and 23 of the second amended project order the analysis area for noise and other surveys is identified as “all required assessments in the application apply to the entire site boundary, which by definition includes all corridors under consideration, including alternatives as well as related or supporting facilities and temporary laydown and staging areas.”
4. In addition to the lack of noise modeling of the entire boundary, the application does not demonstrate compliance with OAR 340-035-0015(38) because the noise monitoring and modeling was not completed on multiple noise sensitive properties impacted by the development. Noise Sensitive Property “means property normally used for sleeping, or normally used as schools, churches, hospitals, or public libraries.” The application documents, per the notification/mailling lists, that only residences were modeled and notified. Schools, hospitals, churches and libraries were NOT notified.

Additional NSPs that need to be modeled (and monitored) and were not are: campgrounds, for example (but not exclusively): Morgan Lake Park, Hilgard State Park. Also, depending on the resolution over the notification distance (1/2 or 1 mile), there are additional schools and a hospital, and potentially more.

5. In the modeling of ambient statistical noise impacts, the total noise applicable, has not been included in the modeling and therefore is out of compliance as well. According to OAR 340-035-0035, subsection (5), noise that applies to this development needs to include noise generated by: (b) warning devices not operating continuously for more than 5 minutes; (c) sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles; (e) sounds created by bells, chimes or carillons; (j) sounds generated by the operation of aircraft and subject to pre-emptive federal regulation and (k) sounds created by the operation of road vehicle auxiliary equipment complying with the noise rules for such equipment as specified in OAR 340-035-0035(1)(b)(B)(ii). For example, Idaho Power needs to model helicopter noise and noise from road worthy vehicles to figure out the noise impacts of the development. That was not done.
6. The Draft Proposed Order and the application do not include modeling of noise effects other than weather conditions and how they will increase noise levels. There is no modeling of “burn in period” which normally occurs during the first year, impact of dirt or oil from construction and maintenance of the lines, nicks and scrapes on the conductor surfaces, sharp edges on suspension hardware, nor the effects from fog, dew and bird feces. The Oregon Department of Energy’s



consultant, Golder Associates, stated in their letter of December 19, 2017, Project No. 17-88390, page 3 of their report, the following: “Some of the above irregularities such as nicks and scrapes, could result in longer term noise impacts (not infrequent) and may be within IPC’s ability to fix and control. Such irregularities would not qualify as infrequent.” The report also states that these would not be conditions outside the developer’s control.

The analysis regarding the developer’s request for a variance or exception to the noise standard and the department’s justification for allowing one cannot be made until all the noise information has been provided as required by OAR 340-035-00151, the Project Order and OAR 340-035-0015. In addition, since the developer could control some of the noise exceedances, according to their own consultant, there should not be an exemption or variance based on the “infrequent irregularities.”

#### **4. Noncompliant Exemption/Variance Request**

The Council cannot issue a cite certificate, exception or variance, to the DEQ noise rules because the methods used by Idaho Power are not in compliance with the DEQ regulations and the "Sound Measurements Procedures Manual 1." The definition of “Statistical Noise Level” in OAR 340-035-0015 (59) states: “Statistical Noise Level means the noise level which is equaled or exceeded a stated percentage of the time. An L10=65 dBA implies that in any hour of the day 65 dBA can be equaled or exceeded only 10% of the time for 6 minutes.” Per the definition in the DEQ rules, a modeled noise level of +10 over the baseline standard equals an exceedance of the standard. Furthermore, there should be a margin of error applied, as mentioned above.

1. The applicant’s arguments to support their request for an exemption and a variance to the Ambient Antidegradation Standard is reflected in the DPO beginning on p. 552.

*“The Department agrees that OAR 340-035-0035 applies to new industrial or commercial noise sources, and in this instance, the noise source is the proposed transmission line. However, in the absence of a formal definition of “noise source” within the rule and given the extent of the linear facility, the Department interprets noise source as the source of noise and specific noise level at identified NSR locations. Based on this interpretation, the exception would only apply at the identified NSR locations or grouping of NSRs where the specific noise level from the noise source exceeds the ambient antidegradation noise standard, which is estimated to occur at specific NSR locations. An exception for the entirety of the proposed transmission line is not necessary as the noise source would not exceed the ambient antidegradation standard at other NSR locations along the route. Therefore, the Department recommends Council evaluate and apply the requested exception to the noise source at the 36 identified NSR locations, and not for the entire alignment of the proposed.”*

The ODOE, to their credit, stated that an exception could only be granted on the specific NSRs; however, we disagree that 36 exceedances should be granted! Imagine when the baseline monitoring is done correctly, and there are 83+ NSRs and a recreation area impacted? Will ODOE still recommend an exemption? As mentioned below, the time frame for modeling is inaccurate, it must be for a 24 hour period; and, the foul weather analysis is being applied with averages across the full 300 miles with 4 meteorological stations; and.

For the full route variance request, starting on p. 561 in the DPO, the developer and the ODOE essentially use the same rationale as the exemption request and recommend that the Council approve. We completely disagree with the analysis that a full variance could be applied, since the modeling (and the monitoring) methodology is in violation ODEQ rules. Idaho Power does not meet the test for an exemption or variance!

A review of the report provided by the applicant's consultant, Golder Associates, indicates the following:

- a. The use of the night time monitoring measurement (midnight to 5 a.m.) was determined to be appropriate for the establishment of the baseline noise level only; however, it is not appropriate for the modeling of impacts that the line will create. [We agree and according to the ODEQ rules that is a correct methodology/time frame, as the developer has the choice to use either the ODEQ baseline ambient noise level of 26 dBA—or—to monitor at the site location (per NPCSI) for each NSR affected. However, this was not done. All of this was described above.]
- b. The consultant indicates that conditions other than weather may increase the noise level. These conditions are under the control of the developer. Per section 2.6, page 3 of the evaluation by Golder Associates, "Based on the ODEQ's Noise Control Regulations, the Project would not qualify for an exceedance/variance for non-weather related irregularities as those irregularities could be long term in nature and potentially within IPC's control. Golder recommends that ODOE confirm that the exemption would not include non-weather related irregularities that are not caused by foul weather events or a variance for irregularities that are under the operator's control."

While we appreciate that ODOE is NOT recommending a variance for non-weather related exceedances, we disagree that 'weather related' exceedances are compliant with ODEQ standards because the 36 dBA noise limit (10 dBA over the 26) is "black and white;" it does not mean substantial compliance or no more than a de minimis violation (see LUBA case number 2011-014.)

We agree with the consultant that all of the non-weather related exceedances cannot be exempted.

- c. The exceedances of the L10 or L50 noise standard cannot be determined by identifying the times the standard would be exceeded during the period from midnight until 5:00 a.m. The definition of "Statistical Noise Level" in OAR 340-035-0015 (59) states: "Statistical Noise Level means the noise level which is equaled or exceeded a stated percentage of the time. An

L10=65 dBA implies that in any hour of the day 65 dBA can be equaled or exceeded only 10% of the time for 6 minutes.

While the night time monitoring may be an acceptable methodology determining baseline levels, it cannot be used exclusively for the modeling measurements to determine exceedances. This is not correct methodology; therefore does not meet compliance.

- d. The consultant's evaluation of the Request for Exemption contained in section 2.4, Page 2 of their review contains information not relevant in a ODEQ evaluation as follows:
  - i. The consultant stated the following: *"Baseline noise levels are conservatively estimated and are based on a late night period of time when outdoor human activities are limited. Based on the typical attenuate of open windows or doors of -10 dBA, the noise levels impacting humans indoors would be close to that of the original outdoor baseline noise levels."*

The developer is required to make conservative estimates of noise impacts due to the potential for modeling to be incorrect. The use of the actual late night noise levels resulted in a significantly higher noise baseline than the 26dBA which is the standard absent measurement of the actual noise levels. The levels the developer is using are as much as 18 dBA above the 26 dBA standard. The use of actual noise levels as opposed to the standard mean that the evaluation is clearly not "conservative."

The noise standard is measured and applied at a clearly defined location. The suggestion that if the citizen were to move to another location (inside the home), the noise would be less is not legitimate. The baseline noise level would have been less inside the house and the modeling would have shown exceedances at this location also. ODEQ modeling methods do not allow for interpretations on levels based on location (e.g.: inside or outside the house.)

- ii. *"Impact noise levels were conservatively estimated based only on distance attenuation, therefore, this noise level is not expected to be consistently this elevated during every foul weather event."*

Noise modeling procedures dictate the methods used by developer to model noise impacts. Arguing the fact that the developer followed the procedures in this instance does not support discounting the results.

- iii. *"The infrequency of foul weather events given the meteorological data provided and the arid nature of the area of the Project."*

Corona effect is not only the result of rainy weather, but also a result of altitude with higher altitudes having more and louder corona effect, winds, moisture on the lines from fog, dew, and/or ice, etc. None of these additional impacts were considered by Idaho Power, the Oregon Department of Energy or the consultant in their determination.



In LUBA case number 2011-014, the final order regarding David Mingo vs. Morrow County addressed the issue of exceptions for unusual and infrequent events in their final opinion and order: on page 11 and 12 it states: "We restate the planning commission's findings below to clarify the planning commission key findings:

- A. Invenenergy's facility violates noise limits at the Eaton, Mingo, Wade and Williams Residence.
  - B. The evidence that the planning commission relied on to conclude that noise limits are violated at those four locations was provided by Invenenergy's expert, Michael Theriault Acoustics, Inc. (MTA) and Eaton's expert Dailey Standlee & Associates, Inc. (DSA) and that evidence appears at Planning Commission Record 88 and 273.
  - C. Invenenergy will comply with the applicable noise limit when the noise measurements at those four locations do not exceed 36 dBA.
  - D. Invenenergy's noncompliance with the noise standard at the four residences does not qualify for the exception for "unusual and/or infrequent" events at OAR 340-035—0035(6)(a)
  - E. Compliance with the 36 dBA noise limit means compliance ("black and white"); it does not mean substantial compliance or no more than a de minimis violation."
2. The developer averaged metrological data in their noise source estimates over the entire transmission line rather than using noise at a given residence and noise in a 24hr period. The standard applies to noise at a specifically identified location per NPCS1. The developer only included weather from midnight till 5:00 A.M. to count the times the standard was exceeded. The standard is based upon the definition of "Any one Hour" as given in OAR 340-035-0015 (7). It states that this term means any period of 60 consecutive minutes during the 24 hour day.
3. The Oregon Department of Energy has casually defined "infrequent" or "unusual," as events that are "not constant, not continuous, and not representative of normal operating conditions." This definition needs consultation and concurrence from the Oregon Department of Environmental Quality that they agree with this definition or intended the use of this definition in the application of their rules. The Oregon Department of Energy and Energy Facility Siting Council are charged with applying other agency rules as the other agency would, not creating new rules or definitions. In addition, the term has been defined in litigation. See LUBA case Number 2011-014, page 7 indicating that compliance is to be treated as "black and white." Either they meet the standard or they do not, and that same order states that locations with far less exposure than those in this development were determined to not meet the standard.
4. The developer used the US Department of Energy Corona and Field Effects Program and the Datakustic Computer-Aided Noise Abatement Program standard 9613-2, Attenuation of Sound During Propagation Outdoors. These models are based upon a 24 hr. period. Applicant's use of only portions of the 24 hr. period invalidate the results.

## 5. Mitigation & Complaint Resolution

1. The Oregon Department of Energy Draft Proposed Order suggests that the modeling performed by the applicant should be relied upon to determine if an exceedance has occurred. Modeling is not an appropriate method of determining if an exceedance occurred or is occurring once a development is built.
2. Once the development is completed, ORS 469.507 requires testing or sampling to show ongoing compliance with the standard. The developer has the burden of proof, not the impacted citizen, to prove that the modeling completed by the applicant was not accurate. When the noise is too loud, the approach to mitigation according to the DPO, places the property owner at the mercy of the developer and the Oregon Department of Energy. If the property owner does not agree with the modeling provided by Idaho Power, they have to provide alternative noise data. See page 555, Line 10. The property owner would have to pay to obtain evidence to argue that the “modeling” was not accurate.

In the event of a noise exceedance, the Oregon Department of Energy should require the developer to purchase a noise easement or reduce the noise level through mitigation or other means to bring the noise level within the standard.

All noise complaints should be addressed through having the developer provide documentation in the form of noise monitoring of the actual impacts of the development on the identified property. Since most of the material in the application is based upon noise modeling, not actual monitoring, it will not provide credible documentation proving the developer is correct and the developer is supposed to pay for proving the true noise level. The rules state that the developer is supposed to pay for monitoring.

3. The developer claims that they cannot mitigate noise through line shielding or burial because it is “too expensive.” Therefore, the developer recommended that if their development can’t meet the noise requirements that they provide or pay for noise blocking drapes. Residents then would be able to live with the noise, but would not be able to see out their windows! Not sure what campers would do? The Oregon Department of Energy should not be allowing an exception or variance, and they should not be determining mitigation for any noise impacts from this development.

## 6. Summary

Idaho Power needs to be held accountable to the rules! Their problem is that they **cannot comply and ODOE should not be issuing any exemptions or a variance to this project. The applicant cannot comply with OAR 340-03500 and its sub-divisions, therefore this application for Site Certificate should be denied!**

This site certificate should be denied due to the many problems with the establishment of the baseline noise level methods used by Idaho Power. Once the noise measurements comply with NPCS-1 procedures, the developer needs to:

- Reapply using acceptable monitoring, or reapply using the 26 dBA standard baseline noise level.
- Determine which properties are over the standard, including residences whose ambient degradation amount is +10 dBA and above.
- Do the modeling for all areas within ½ mile of the entire site boundary, including schools, churches, hospitals and libraries; and recreation areas.
- Include helicopters, road worthy equipment and other noises not exempt in the standard in the modeling.
- Not average any of the results.
- Be site specific, complete noise monitoring and modeling consistent with DEQ direction, not based upon average noise or average weather conditions over a 300 mile area.
- Not limit exceedances to the 5 hr. period between midnight and 5:00 a.m.

There is currently no basis for making any decisions regarding the exceedances, the amount and frequency of those exceedances, or justifying any exemptions or variances. Allowing a site certificate to be issued based upon a clearly faulty analysis of the impacts can and will result in legal action from the injured parties due to the malicious and reckless interference with landowners' rights to enjoy their property. The developer and the Oregon Department of Energy are clearly culpable as they are aware of the exceedances of the standard and have failed to disclose the inconsistencies with the statutes and rules. ODOE also unlawfully amended the rules.

**Idaho Power fails to comply with the requirements of OAR 345-021-0010, OAR 345-022-0000, OAR 345-022-0100, OAR 345-022-0040, OAR 340-035-0035, OAR 340-035-0010, OAR 340-035-0100, ORS 467.010 and 467.020; therefore, the application and request for variance must be DENIED!**

**Attachments:**

- 4.1 [Construction Noise in Urban Area](#) (use link)
- 4.2 [Non-compliance with Noise Standards in Recreation Area](#)



## 5. Scenic, Recreation and Protected Areas

**Idaho Power has mischaracterized Scenic and Visual Resources and Recreational Areas based on a corporate self-serving subjective evaluation. As a result, the site certificate must be denied.**

**The ODOE accepted these unsupported evaluations without conducting a thorough or independent evaluation of scenic and recreational assets, thereby limiting the essential scope of identifying and analyzing scenic, recreation and protected resources.**

The standard, Scenic Resources 345-022-0080 enables the developer and the Council to limit the scope of their analysis to only the “*local use plans, tribal land management plans and federal land management plans...*”

Scenic Resources 345-022-0080 “(1) *Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources and values identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.*”

The Recreation Standard 345-022-0100 states:

*(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area as described in the project order. The Council shall consider the following factors in judging the importance of a recreational opportunity:*

- (a) Any special designation or management of the location;*
- (b) The degree of demand;*
- (c) Outstanding or unusual qualities;*
- (d) Availability or rareness;*
- (e) Irreplaceability or irretrievability of the opportunity.*

It appears that the developer, by deciding what is *important* and what is *scenic*, is taking advantage of understaffed rural counties that have not been able to keep up with the bureaucratic

nuances of their “lists.” For example, the only areas in Union County so designated are the Blue Mountain Forest Wayside and the Minam River, (DPO p.12) because they are identified with the precise word “**scenic**” in the “Union County Comprehensive Plan.” Considering the endless exceptions ODOE regularly grant to developers, it would be appropriate for ODOE to provide similar leeway to the interpretation of local documents.

Idaho Power conjured up many pages of a methodology for Exhibits R and T, to support their charade of analysis. However, their conclusions are unsupported with relevant credible data and fail to consider Oregonians’ subjective “opinion/evaluation” of their scenic and recreational resource. Current tourism promotion of local scenic and recreational assets, as well as data from Chamber of Commerce records or campground host daily logs could give a more accurate measure of the resources. Instead, Idaho Power created an elaborate “analysis” to confuse the public or worse, to attempt to impress the Council with an obfuscating methodology.

Admittedly, Scenic and Recreation areas will have a degree of subjectivity in any analysis. There is not an objective or scientific basis for visual/scenic resource evaluation within the Oregon statutes or rules. The ODOE has allowed the developer to develop their own methods for evaluation. Within the Recreation standards a few criteria are mentioned to guide the analysis.

We have attached our Comments on:

1) Morgan Lake Park:

[https://drive.google.com/open?id=1AiVdT5jXr9Dm7P6B5ZRi91x\\_jv2Iiy7x](https://drive.google.com/open?id=1AiVdT5jXr9Dm7P6B5ZRi91x_jv2Iiy7x)

2) Twin Lakes (omitted entirely from ODOE evaluation):

<https://drive.google.com/open?id=1Pd0YZs-27zxAtpjcJrDdk37OYKw8amRy>

3) a [summary of Union County’s Land Use Plan’s references to preserving the integrity of the valley’s rural scenic landscape](#).

Even evaluated using Idaho Power’s convoluted methodology, we have shown in these attachments that these areas -- of vital importance to Union County -- deserve protection from the overwhelmingly industrial impacts of ugly, looming transmission towers.

Baker County’s premier scenic and recreation site, visited by people from all over the word, is covered within Section 8. Historical & Cultural, and demonstrates another non-compliance with Oregon’s Scenic and Recreational Standards.

## 6. Geology, Soils, Carbon

This section begins by addressing the ODOE/EFSC Structural Standard (Geology & Seismic) OAR 345-022-0020, particularly in Union County, Oregon. It is followed by an overall and up-to-date look at effects of climate change in the context of OAR 345-022-0022 Soil Protection; however this standard is woefully inadequate.

### 1. Structural Standard.

The context for analyzing the proposed B2H line in and around the city of La Grande in Union County needs to be stated clearly: any of the potential routes could become a de facto utility corridor. That possibility is inherent in the BLM's statements contained their FEIS/ROD. Any appraisal of the proposed routes must, therefore, evaluate the cumulative impacts of multiple utilities asking to site their equipment in any of the possible right-of-way corridors. We do not see any evidence in the BLM analysis for any consideration of those cumulative impacts. This site certificate should be denied given the high probability of just such impacts.

Furthermore, the following review of the landslide, fault, and slope instability; of the earthquake potential; and of the implications of dynamite blasting; will highlight the fragility and instability of the Mill Creek route. This is a very poor choice for a transmission line and for a likely utility corridor.

The developer's review of the structural risks in Union County's Mill Creek alternative route does not comply with **OAR 345-022-0020 Structural Standard which states:**

*(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that:*

*(a) The applicant, through appropriate site-specific study, has adequately characterized the seismic hazard risk of the site; and*

*(b) The applicant can design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site, as identified in subsection (1)(a);*

*(c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a*



*seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and*

*(d) The applicant can design, engineer and construct the facility to avoid dangers to human safety and the environment presented by the hazards identified in subsection (c).*

### **A. Landslides**

The Mill Creek Route would traverse a minimum of ten significant landslide areas in Union County<sup>11</sup>. The route would enter the Grande Ronde Valley from the West and then run South and out of the Valley through Ladd Canyon, crossing many of the historical landslides listed below. Some of these SLIOD's are within the city of La Grande, others are along Foothill Road, with their descriptions taken directly from Attachment H-4 of the DPO. Pointedly, there are 13 towers along this proposed route potentially impacted these SLIDO's. It must be noted that none of the other proposed routes in Union County contain this degree of landslide risk.

**SLIDO 380, 33** - The IPC Proposed Route crosses the mapped limits of the slide between towers 108/2 and 109/2, and may affect stability at towers 108/3 through 109/2, along with associated work areas. In the Schlicker and Deacon (1971) map, the one slide area is about 650 feet southeast of tower 107/4 and 465 feet northeast of tower 107/5. A field reconnaissance of all these areas should be performed as part of the geotechnical exploration program.

**SLIDO 225** is mapped as a landslide referenced at a scale of 1:100,000 (Ferns et al., 2010). It intersects the IPC Proposed Route between towers 110/2 and 112/2, and may affect stability at towers 110/1 through 112/1, along with associated work areas. A field reconnaissance of this area should be performed as part of the geotechnical exploration program. Schlicker and Deacon (1971) mapped slightly different extents of the same feature at a scale of 1:24,000.

**SLIDO 115** is referenced at a scale of 1:100,000 (Ferns et al., 2010), and its mapped extents intersect the IPC Proposed Route between towers 112/5 and 113/1. The feature is mapped as an alluvial fan, not a landslide; and the material appears to be contained within a drainage spanned by the two towers. The feature is unlikely to affect the proposed towers or associated

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<sup>11</sup> These landslides are denoted as SLIDO 380, 33, 225, 115, 114, 2280, 2282, 2279, 2281, and 56.

work areas. However, a field reconnaissance of this area should be performed as part of the geotechnical exploration program.

**SLIDO 114** is mapped as a landslide and referenced at a scale of 1:100,000 (Ferns et al., 2010). It intersects the IPC Proposed Route between towers 113/3 and 114/3, and may affect stability at towers 113/4, 113/5, 114/2, along with associated work areas. A field reconnaissance of this area should be performed as part of the geotechnical exploration program.

The landslide risk for the Mill Creek Route is unacceptable given the other options open to the applicant.

#### *Faults in Union County*

Exhibit H Table H-2 (pdf p 16) is a summary of the significant faults considered capable of generating a large earthquake within 5 miles of the Proposed Route and the Alternative Route by county. These faults are potentially capable of producing a PGA greater than 0.05 g along the Proposed Route and Alternative Route. Of the youthful Quaternary faults identified by USGS (Table H-2), faults less than 15,000 years old are recent by geologic standards and likely pose the greatest potential for future earthquakes. These faults are assumed to be active. The Mill Creek route is placed right on an active fault in the West Grande Ronde Valley Fault Zone.

#### **B. Hite Fault Zone**

The discussion of the Hite Fault Zone is contradictory. The fault is listed as inactive in Table H-2, while the text in *Section 3.7.6* has this to say:

*Of these active faults, the Hite Fault System, Agency Section, West Grande Ronde Valley Fault Zone, Unnamed East Baker Valley Faults, West Baker Valley Fault, and the Cottonwood Mountain fault crosses the Proposed Route and should be considered during final design.*

In fact the status of the fault system is shrouded in uncertainty. The fault is a suture zone between the accreted terranes to the West and the Blue Mountain uplift. It may be capable of generating very large earthquakes<sup>12</sup>. Again, no one knows. The power-line has to cross

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<sup>12</sup> What follows below is taken from an included document, the hazard sheet distributed by the Washington Department of Natural Resources (DNR) which has this to say about this part of the Blue Mountains:

*The Hite fault system is a zone of faults that parallels the northeast-trending flank of the Blue Mountains in Oregon and Washington. This fault system is thought to be the suture between the stable North American craton to the east and accreted terranes to the west.*

While the Hite fault has not seen any recent activity, it must be acknowledged as a potential danger. The scenario

directly over the surface expression of that faulting, where the Blue Mountains first rise up from the Columbia River Basin. That must be accounted for in much greater detail by Idaho Power.

In addition, in Exhibit H: Geological Hazards and Soil Stability, Table B3: Soils Descriptions, Union County, much of the erosion hazard is rated as “severe.” While in Exhibit H Part 2, the maps 19-22 clearly demonstrate that both routes run through areas of extreme erosion hazards.

### C. Earthquake potential

The *DOGAMI Oregon HazVu: Statewide Geohazards Viewer* () clearly shows that the proposed Mill Creek Route is on an active fault. In even a moderate earthquake, this would be a zone of liquefaction and a zone of very strong earthquake shaking. A GIS overlay of the Mill Creek route onto a map of these known geohazards should be performed. It might reveal that the route overrides and follows the western most fault line.

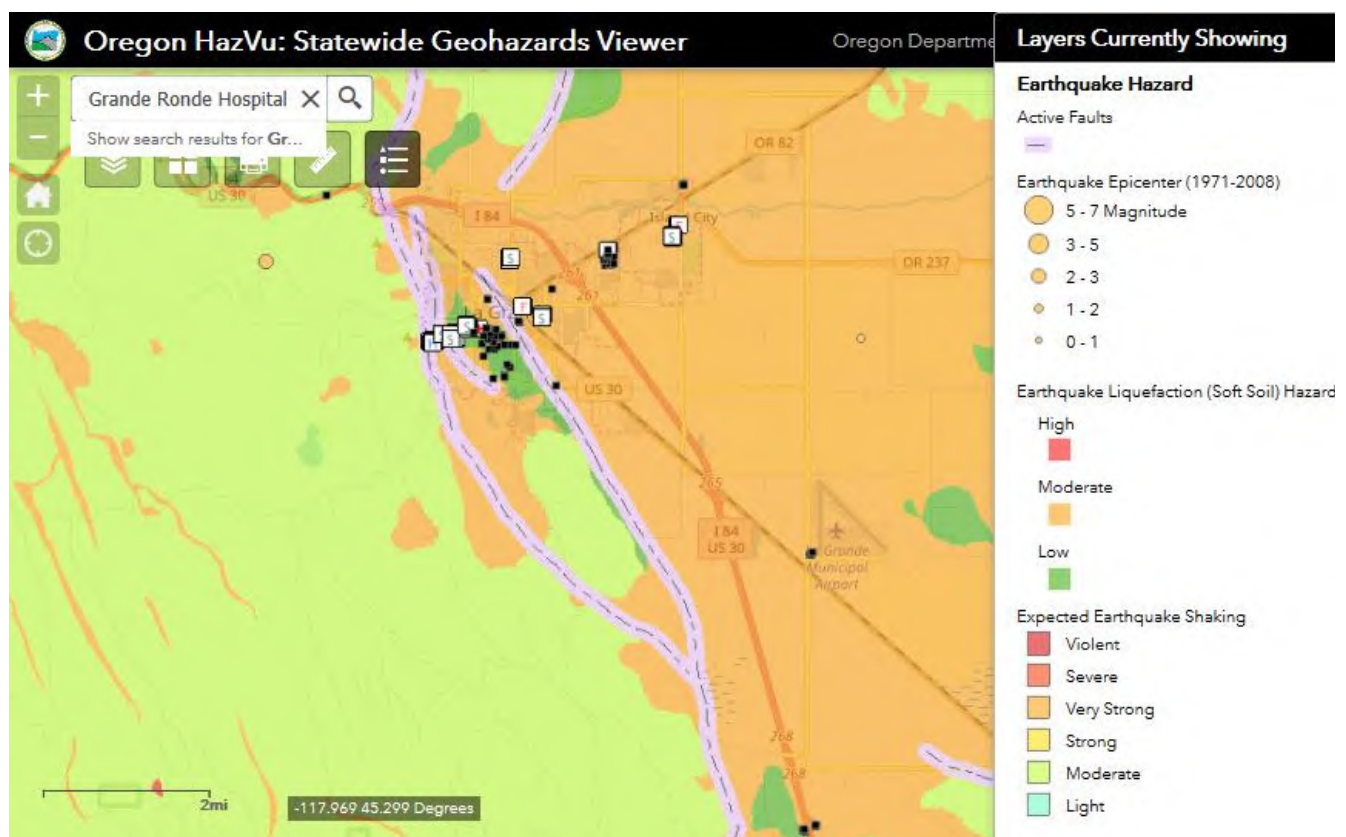


Figure 1: Geohazards in the immediate vicinity of the proposed Mill Creek Route.

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modeled by the DNR is for an extremely damaging shallow quake of magnitude 6.8, a distinct possibility.



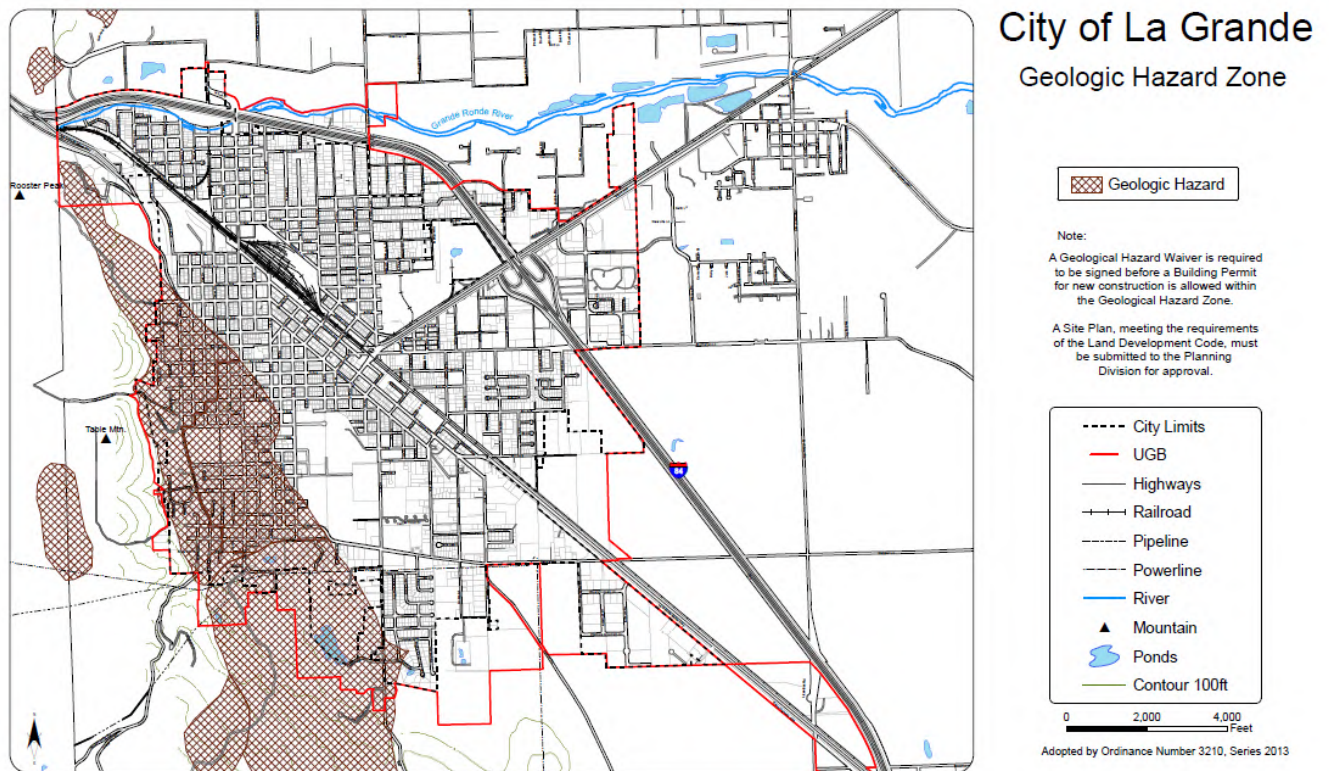


Figure 2: City of La Grande Geologic Hazard Zone

It is worth noting that the area is unstable, with the Grande Ronde Hospital's FEMA rating (3) classified as having a 100% collapse potential even in a moderate zone of seismicity. Given that reality, the **hospital has had significant seismic retrofitting done**, with all the newer facilities built to comply with the most current earthquake standards.

Seismicity Zone: Moderate										
FEMA 154 Rapid Visual Screening Score Card										
	Type	Basic Score	Vert Irreg	Plan Irreg	Pre-Code	Post-Bench	Soil C	Soil D	Soil E	RVS Score
Primary	C1	3	-2	-0.5	0	0	0	-1	0	-0.5
Secondary		0	0	0	0	0	0	0	0	0
Tertiary		0	0	0	0	0	0	0	0	0

Grande Ronde Hospital - LaGrande

**Final RVS Score**

Final Type      Final Score

**C1**      **-0.5**

**FEMA-154 Collapse Potential**

**Very High (100%)**

Figure 3: FEMA scoring for the effect of a moderate earthquake on the Grande Ronde Hospital complex.

In light of the above information, the discussion of earthquake potential is inadequate<sup>13</sup>. Specifically, restricting the analysis to those quakes expected to occur within a 5-mile distance is of little use in any real-world scenario. Under the right circumstances, earthquake wave propagation could easily extend over hundreds of miles causing ground shaking, ground failure, landslides, liquefaction, fault displacement, and subsidence from reasonably probable seismic events on the routes.

This is important because the earthquake potential for the Blue Mountains is largely unknown and the geology problematic. There has been little in the way of geological mapping, and what is known is disturbing. A large structure of unknown origin, the [Olympic-Wallowa lineament](#), bisects the Northern portion of the range, just a few dozen miles from the proposed route of the power-line. Its path can be traced through Puget Sound, the Cascade Range, the Wenatchee Mountains, the Rattlesnake Hills on the Hanford Nuclear Reservation, the Walla Walla River canyon, the Blue Mountains, and into the Wallowa Mountains. Scientists have no clue about its tectonic origin.

What is known is that the area has been the site of [earthquakes in the past](#), and a [recent cluster of small quakes](#) as well. Given the brief span of European occupation and settlement, the historical time-series for earthquakes in this area is so short as to be useless. We simply do not know the geology of this area well enough to write off the possibility of large quakes.

While power-line towers are fairly resistant to propagation of s-waves from an earthquake, p-waves are also possible and would be more problematic in the event of liquefaction – also represented by contradictory statements in the document<sup>14</sup>. The up-and-down motion of those waves can quickly cause that to happen in wet soils, undermining the integrity of the towers. The towers as proposed are to be located in very isolated locations for much of the potential routes, so they will be hard to get to quickly.

There should be contingency planning for a large earthquake, the possible compromise of soil integrity, and the resulting potential for damage to the towers, with a loss of power or in the worse case, the possibility of wildfire ignition from an unmoored power-line. In the face of the destruction visited on rural California, this should no longer be seen as a remote

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<sup>13</sup> Section 3.7, [2018-09-28-B2H-ASC-Exhibit-H-Part-1.pdf](#)

<sup>14</sup> Section 3.7.6 in discussing seismic hazards mentions liquefaction in its first paragraph:

*The Project may be subject to ground shaking, ground failure, landslides, liquefaction, fault displacement, and subsidence from reasonably probable seismic events.*

While the section that follows, which directly addresses the potential for liquefaction, has this to say:

*Because the majority of the transmission line crosses relatively stable terrain with shallow bedrock and deep groundwater, the majority of the Site Boundary has a low susceptibility to liquefaction.*

This isn't horseshoes or hand grenades, so having the *majority of the Site Boundary* of low susceptibility isn't close enough, it's not adequate. All the potential routes are difficult. Each will at some point stage towers in areas where liquefaction is a problem. The Exhibit needs to address this directly, not by hand-waving.

possibility. Emergency planning and risk mitigation, including financial risk, must be adequately addressed.

#### **D. Blasting**

Blasting would likely be required during the construction phase of the B2H line near many of the SLIDO's on the Mill Creek route. *Attachment G-5 Framework Blasting Plan* states (1.2 Blasting Plan Purpose):

*Blasting may be needed in certain areas with rocky terrain to excavate tower footings, prepare station pads, and to construct access roads.*

##### *3.1 Overview of Blasting Principles:*

*The Construction Contractor(s) will avoid blasting in potential rockslide/landslide areas to the maximum extent possible and will consult with a geologist before blasting in such areas.*

In reviewing the application it is very clear that Idaho Power has not fully considered the impacts of blasting on the unstable slope nearby a populated area in La Grande, Oregon. The maps on page 169 of *Exhibit H Geological Hazards and Soil Stability*, show the B2H line at MP 106—108, where it is within about 2500' of a zone of *Unconsolidated Sediments* in (Qf of ). It then crosses a zone of *Landslide Deposits* near MP 108 (Qi of ).



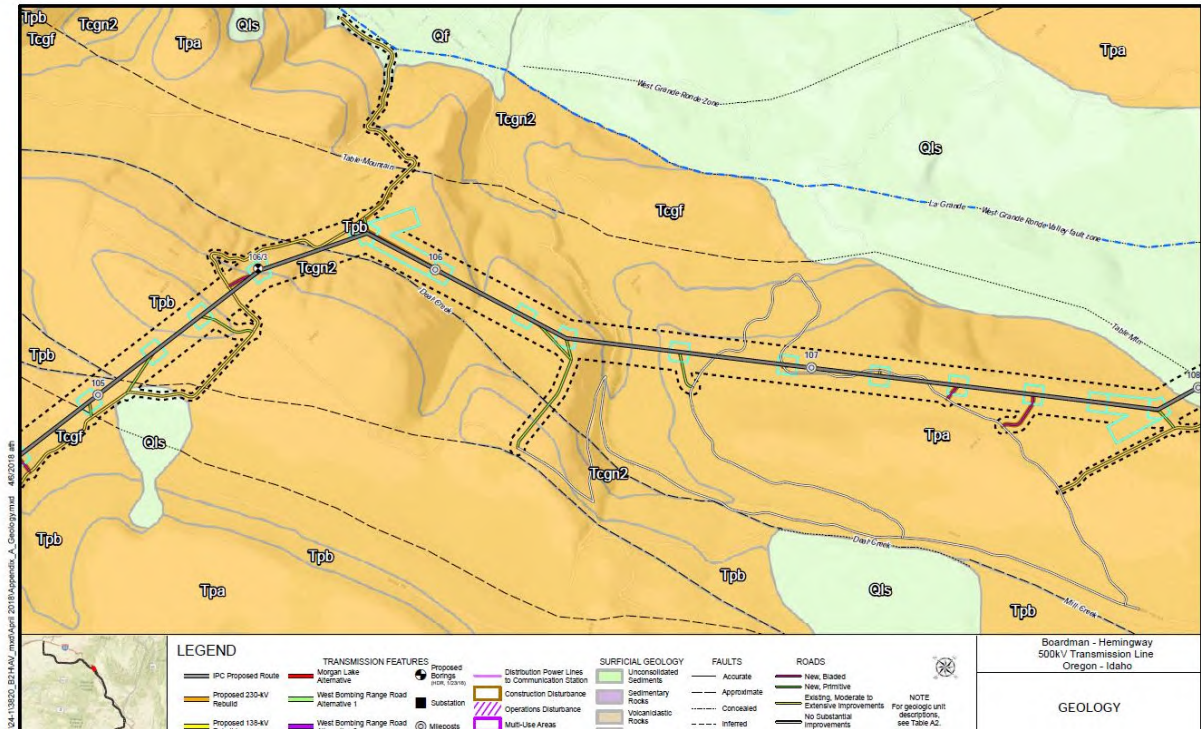


Figure 4: Proposed B2H line within 2500' of unconsolidated sediments and nearby population

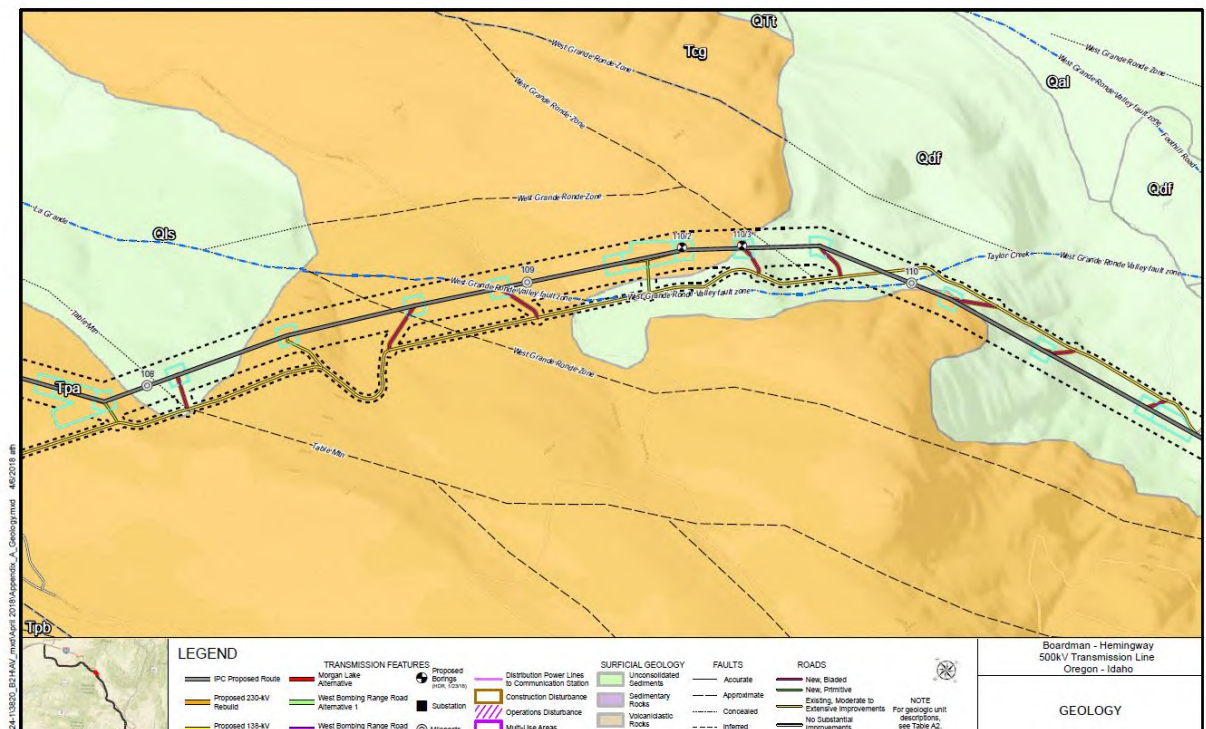


Figure 5: Proposed B2H line crossing landslide deposits

Section 3.3.2 *Blasting Notification and Safety Procedures* states that:

*...damages that result solely from the blasting activity will be repaired or the owner fairly compensated.*

while Section 3.4 *Design Features of the Project for Environmental Protection in Design Feature 32* has this to say:

*Watering facilities (tanks, natural springs and/or developed springs, water lines, wells, etc.) will be repaired or replaced if they are damaged or destroyed by construction and/or maintenance activities to their predisturbed condition as required by the landowner or land-management agency. Should construction and/or maintenance activities prevent use of a watering facility while livestock are grazing in that area, then the Applicant will provide alternate sources of water and/or alternate sources of forage where water is available.*

After-the-fact damage control is not acceptable. Before any blasting occurs Idaho Power must meet with the landowners of land they want to set off explosives. Items that might be damaged in blasting must have baseline data collected on them for any reasonable compensation to occur.

In the case of a well, natural or developed spring, baseline cfs data must be compiled. For a water line, road, building, or other natural or human-made structure, an assessment must be developed before any blasting is done. Damage due to blasting and a proper replacement value can only be calculated from such a baseline.

The rational conclusion is that the Mill Creek Route is not suitable for any type of utility placement when landslide potential, the soils, the existing faults, the slope instability and the probability of an earthquake in the future, all exist. When combined with the blasting which would be unleashed along the proposed project route, it's clear that siting a transmission line – much less a utility corridor – is not a decision a prudent person would make.

The applicant failed to comply with OAR **345-022-0020**, because they have NOT “...adequately characterized the seismic hazard risk of the site.” Furthermore, it would be nearly impossible for any developer to “...design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site,” (per the OAR cited above.) **Therefore, the Council should outright eliminate from further decision, the Mill Creek alternative in Segment 2 of the B2H.**

## 2. Soil, Climate, Carbon

### OAR 345-022-0022, Soil Protection, states:

*“To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to soils including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills.”*

The following analysis will focus on concerns related to soil productivity, existing and future above and below ground carbon sequestration, carbon dioxide emissions, climate change, monitoring of effects and reclamation efforts. While the standard does not directly mention carbon, we believe it MUST be included as critical and necessary criteria for the Council’s decisions on the 300 mile B2H project.

**To jump to the conclusion: the project is in direct opposition to the State of Oregon’s efforts to proactively do its part for addressing climate change (OGWC 2018a, 2018b) and should not be approved.**

A review of Exhibits I, K and Y make clear that this project will have a negative, long-term impact on climate by reducing soil productivity, removing existing above ground stored carbon, accelerating the decomposition of below ground carbon, and generating carbon dioxide emissions during the construction process and as a result of construction activities. We have ample past evidence (super fund sites, Forest Service roads left unmaintained, old mine shafts, hydroelectric dams without promised fish passage etc.) to know that what IPC promises will happen, will not actually happen. Money dries up, priorities change, funds are not sufficient for the work needed, staff are not allowed time to monitor, staff changes and historical knowledge of monitoring and reclamation commitments end up on a shelf gathering dust and forgotten or in court with people attempting to get commitments fulfilled. Therefore, rather than travel the same tired road, using up valuable energy, time and resources, the EFSC should not approve the project and stop it before destructive construction begins.

Specific concerns related to project are described below.

#### **A. Carbon dioxide emissions and OAR 345-021-0010 (1)(y)**

In Exhibit Y (Section 3.1, p.Y-1), IPC states that OAR 345-021-0010 (1)(y) regarding carbon dioxide emissions does not apply to the Project because *"the Project does not include a base load gas plant, does not include a non-base load power plant, and will not emit carbon dioxide."* However, IPC should not be exempt from complying with OAR 345-021-0010 (1)(y) because the construction of the transmission line will result in large amounts of carbon dioxide emissions.

Actions in the project that will generate carbon dioxide emissions are found in Exhibit K, Attachment K-2. In this Attachment, IPC states that they will harvest timber and burn or masticate the slash along the ROW depending on the fuel loads (p. 12-15). The timber harvest, as well as any vegetation removal along ROW and for roads and buildings, will speed up below



ground plant decomposition and further contribute to carbon dioxide emission. Given that soil carbon has been identified as representing a substantial portion of the carbon found in terrestrial ecosystems (Ontl and Schulte 2012), actions that release it back into the atmosphere are of concern and will contribute to climate change. IPC also plans to build roads and structures which will result in carbon dioxide emissions. All of these activities are directly tied to the project and necessary for the project to be completed (connected actions). Therefore, the project **should be held accountable to OAR 345-021-0010 (1)(v) and the existing application is incomplete and should not be approved.**

**B. The project is not in alignment with Oregon's climate goals.**

The project is not in alignment with Oregon's climate goals because it will have a cumulative negative effect on climate. The Oregon Global Warming Commission's 2018 Forest Carbon Accounting Report (OGWC 2018a) directly addresses forest harvest and fire as carbon sources and has identified the importance of intact forests as carbon sinks. Under ORS 468A.250(i), an accurate forest carbon accounting is required to meet the directive to the Oregon Global Warming Commission (OGWC) to *"track and evaluate the carbon sequestration potential of Oregon's forests, alternative methods of forest management that can increase carbon sequestration and reduce the loss of carbon sequestration to wildfire, changes in the mortality and distribution of tree and other plant species and the extent to which carbon is stored in tree-based building materials."*

**Because the project effects are in opposition to Oregon's climate goals, the project should not be approved.**

**C. IPC has not addressed or quantified the amount of existing and potential future carbon sequestered above and below ground lost as a result of this project.**

The project will release an unknown amount of carbon back into the atmosphere and decrease soil productivity in the disturbed areas. The loss of soil productivity will limit future carbon sequestration potential. Carbon sequestration in plants and in the soil is an important strategy for helping to address climate change (Ontl and Schulte 2012) and so needs to be maximized as a climate change strategy. Consequently, the project is counter to Oregon's climate goals as described in the Oregon Global Warming Commission's 2018 Biennial Report (OGWC 2018b). Because the application is incomplete (no carbon storage and loss analysis) and in opposition to Oregon's climate goals, the project should not be approved.

**D. Restoring soil productivity**

The information and language is deliberately vague. Absent in the application is any discussion of what soil factors will be quantified to determine pre and post disturbance productivity. Absent also is any discussion of who determines if the soil restoration is sufficient or how close is close enough. Will compensation be a one-time payment or ongoing to account for lost future potential?

IPC understands that restoring soil productivity to its prior condition after disturbance is not economically feasible. This understanding is evident in the language they use in Exhibit K/Attachment K-1 (see examples below), language that puts limits on what they are obligated to do to restore productivity. Phrases such as “as nearly as possible” and “reasonably restore” allow IPC to be in full compliance with what they said they would do (i.e. as nearly as possible; reasonably restore). Their frequent references to compensation suggests that this will be their chosen approach since restoration of soil productivity is costly, time consuming and difficult, if not impossible in some cases (e.g. loss of top soil due to erosion). Yet what does “reasonably restore” mean? Reasonable to whom and for what?

*Attachment K-1, Section 7.0: Efforts to minimize impacts to agricultural lands*

P. 28: Land used during construction of the transmission line will be restored, as nearly as possible, to former productivity (p. 28).

p. 36: IPC together with the landowner..., will strive to schedule activities to minimize impacts and identify reasonable measures to restore agricultural land to its original productivity.

*Attachment K-1, Section 7.3: Mitigation Actions*

P. 37: IPC will reasonably restore the land to its former condition or compensate each landowner, as appropriate, for damages and/or impacts to agricultural operations caused as a result of Project constructions (Attachment K-1, p. 37).

In Exhibit I, tables I-5 and I-9 identify 4347.6 acres of “temporary” disturbances and 756.9 acres of permanent disturbance for a total of 5704.5 acres. As the table below shows, the soils in the proposed disturbance area have a high erosion potential. A permanent loss of soil productivity can be expected with its corresponding loss of carbon sequestration potential. This is in addition to the permanent compaction impacts as a result of both permanent and temporary roads, despite restoration efforts of the temporary use roads.

Erosion Factors (from Tables I-5, I-9 in Exhibit I)	Total acres (temporary and permanent disturbance)	% of total area disturbed
Highly Wind Erodible	1265.5	22%
High K Factor (easily detached soil particles)	2918.6	51%
Low T Factor (soil loss tolerance)	2708	47%

Soil loss or reduced productivity is a long-term impact with financial and ecological costs. These long-term financial impacts include loss of the opportunity to benefit from any carbon sequestration program, loss of agricultural productivity, and an increase in soil and plant sensitivity to climate conditions such as drought. The loss of below ground organic matter due to the project will lead to a decrease in the water-holding capacity of the soil (important feature given climate change) and in nutrients. These losses in turn contribute to decreased soil

productivity, plant growth, and the ability of disturbed areas to sequester carbon. While separating out topsoil from subsurface soil may prevent mixing, topsoil key soil structure and organic matter will be lost in the process of removing and piling it. Soil permeability and porosity and organic matter are factors that influence the movement of water and nutrients needed for plant recovery. Therefore, the productivity of the top soil will have decreased considerably from its pre-disturbance condition.

The developer and ODOE attempt to emphasize the number of roads that will be defined as temporary. These roads are temporary only in the context of access and use, not in terms of its footprint and impact on the landscape. Years after “temporary” roads were closed with some attempted mitigation, many remain drivable in a personal vehicle and ATVs. Therefore, use of the word “temporary” in reference to roads or other construction related activities is incorrect. All of the soil mitigations proposed by IPC are used by the Forest Service (e.g. mulching, seeding, scarifying, ripping of roads) with very limited success at restoring the soil’s productivity and vegetation. The impacts have lasted.

Finally, while erosion and sediment control measures may meet local, county, state, and federal guidelines, what is important is their effectiveness. Top soil lost to erosion cannot be replaced and represents a permanent impact with long-term community impacts. Given the limitations of what is possible in terms of restoring soil productivity, the importance of protecting existing soils and the expected impacts of the project, the project should not be approved.

#### **E. Carbon sequestration is a land use.**

The application lacks an analysis of carbon sequestration as an important land use. It is not mentioned in either Exhibit K (Land Use) or Exhibit I (Soil Protection). Yet it has large economic benefits related to maintaining and improving agricultural yields and ecological benefits related to helping mitigate climate change impacts. Efforts to mitigate climate change means that there will be increased value in altering land use practices to improve the amount of above and below ground carbon stored. As such it represents an up and coming land use. The project will negatively impact over 4000 acres of potential carbon sequestration area and therefore should not be approved.

#### **F. The Economic Impacts to Agricultural Operations (Attachment K-1, Section 6.0)**

IPC undervalues the economic impacts and future losses to agricultural operations because the economic analysis is based only on current use types, not future use types. It ignores the lost future economic benefits of carbon sequestration to agricultural operations where the potential to become quality trade areas in Carbon cap and trade efforts is high. The value of sequestering carbon is expected to become a priority as Oregon works to meet its climate change goals. Therefore, the economic analysis is incomplete and the project should not be approved.

#### **G. IPC has incorrectly limited the analysis area to the 20,750.5 acres and ignores the project’s cumulative effect on climate change.**



The analysis area is too small for the project's impact on climate change and must be expanded to an appropriate scale for a proper cumulative effects analysis to occur. The expansion of scale is required because the impacts of lost existing and future above and below ground carbon sequestration, lost soil and soil productivity, and carbon dioxide emissions have a cumulative effect when added to other existing actions influencing greenhouse gas emissions and carbon sequestration potential (i.e. deforestation, loss of wetlands.)

IPC has expanded the analysis area in other places and should do so related to the project's impacts and contribution to climate change. For example, when assessing the significance of impacting high values soils in the project area, they expanded their comparison area from the site boundary to the County-scale to make the point that only 0.05% of high value County soils would be impacted due to construction (Exhibit I, table 1-7). However, while the overall value may be small when compared at the County or State scale, it ignores the cumulative effects of the loss of high value farm land from other actions within the state and worldwide. It incorrectly treats these impacts as separate, unconnected activities and incorrectly infers that the project has no cumulative effect on soil productivity, agricultural yields, and carbon sequestration potential.

They need to take a similar scale increase approach when presenting the permanent (or foreseeable future) loss of forest and its carbon sequestration and cooling properties. While the amount of forest lost due to the project is small when assessed at the County or State scale, the loss is additive to the other ongoing effects of forest loss. There are already die offs of trees occurring due to climate change which increase in scale with each passing year. These die offs will release additional carbon into the atmosphere, exacerbate the tendency towards larger, more frequent and higher intensity wildfires, and increase the potential for soil erosion and loss of soil productivity. The impacts of increased tree mortality are already being seen due to insects and disease which thrive in hotter temperatures and longer growing seasons.

In summary, IPC has inadequately analyzed the effects of their project because they have too narrowly defined the area and nature of the impacts and their cumulative effect. Any cumulative effects analysis must include the impacts of decreased existing carbon sequestration and future potential carbon sequestration, because the effects of decreased soil productivity and carbon sequestration related to the project overlap in time and space with the impacts of other human land uses changes and interact synergistically with them.

#### **H. Mitigation Measures (Exhibit I, Section 3.6) and Soil Monitoring (Exhibit I, Section 3.7)**

As many have seen firsthand, promises made in project decision documents are rarely met regarding monitoring of effects and reclamation or restoration efforts. Money dries up, priorities change, funds are not sufficient to the work needed, staff are not allowed time to monitor, staff changes and historical knowledge of monitoring and reclamation commitments end up on a shelf gathering dust and forgotten. While IPC may have the best intentions now, we can expect a pattern similar to that observed in many government land use agencies. They include monitoring in their documents with the best of intentions. However, in many cases it is simply a box they must check with the unspoken intent to mislead the public and legal system.

As power demands and power generation technologies change, the transmission line, already an obsolete approach, will only become more so. As a result, IPC can expect its revenue to change, likely decreasing, and with that reduction or change in priorities, reclamation and monitoring of the project will decrease or be dropped. The result will be impacts that exceed what they predict for the project.

## **I. Conclusion**

Climate change makes the project's centralized power grid approach and old outdated technology vulnerable to climate and human disruptions with regional economic and ecological consequences. IPC has ignored emerging issues and new science related to climate change and the importance of carbon sequestration. They are overly optimistic about their ability to restore lost soil productivity and maintain a monitoring and rapid response effort over the long-term. They have minimized the difficulty of restoring soil productivity once organic matter has decomposed and soil structure lost, and ignored the carbon dioxide emissions related to the project.

One has only to look at the Forest Service for examples of what is really going to happen if this project goes forth. In the case of the Forest Service, roads that are supposed to be maintained become rutted and impassable and livestock range monitoring becomes every 5, 10, or 50 years despite documents saying there will be annual monitoring with appropriate management changes. Prescribed burns targets designed to decrease wildfire intensity and spread are not met because of weather, budget or wildfires that take the needed personnel away to fight wildfires. IPC and this project will be no different. It is time for Oregon to move forward and address its energy needs and climate change concerns in a more proactive, ecologically and economically sound way. Denying the Site Certificate is an essential step. If Oregon is to meet its climate change goals, then the Energy Facilities Siting Council Must Deny the Site Certificate.

## **References:**

OGWC (2018a). Forest Carbon Accounting Project Report

OGWC (2018b). 2018 Biennial Report to the Legislature for the 2019 legislative session.

Ontl, T. A. and Schulte, L. A. (2012) Soil Carbon Storage. Nature Education Knowledge 3 (10):35 <https://www.nature.com/scitable/knowledge/library/soil-carbon-storage-84223790/>

## 7. Fish & Wildlife Habitats and Threatened & Endangered Species (T&E)

Because the project cannot fully comply with state standards for protection of Fish and Wildlife Habitats or Threatened and Endangered Species in a manner that will support the life-cycles of native fish and wildlife and the habitats that they depend on for survival.

And because, citizens live in the communities surrounding the Wallowa-Whitman National Forest (WWNF) and habitually use the forest, including the B2H transmission project area, extensively for recreation, viewing wildlife and wildflowers, hunting, fishing, overall aesthetic enjoyment, and other vital purposes, including a source municipal water, these habitats must be protected.

The following rules and statutes directly relate to the narrative in this section:

The Draft Proposed Order, beginning on p. 275, explains that the State of Oregon, under its rules (OAR 345-022-0060) that the Council “...*must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with: (1) The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 (1) through (6) in effect as of February 24, 2017...*” It also, under (2) addresses impact sage-grouse habitat and the sage-grouse specific habitat mitigation requirements of the Greater Sage-Grouse Conservation Strategy will be addressed later in this section.

OAR 635-415-0005 defines habitat as, “*the physical and biological conditions within the geographic range of occurrence of a species, extending over time, that affect the welfare of the species or any sub-population or members of the species.*” OAR 635-415-0005 defines habitat quality as, “*the relative importance of a habitat with regard to its ability to influence species presence and support the life-cycle requirements of the fish and wildlife species that use it.*” (emphasis added.)

OAR 345-022-0070, Threatened and Endangered Species, says that “*to issue a site certificate, the Council, after consultation with appropriate state agencies, must find that:*

*(1) For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction and operation of the proposed facility, taking into account mitigation:*

*(a) Are consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or*

*(b) If the Oregon Department of Agriculture has not adopted a protection and conservation program, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and*

*(2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction and operation of the proposed*



*facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.”*

For the purposes of the narrative that follows we do not distinguish between state and federal laws when it comes to compliance. Rather, we present information related to the resource and species and let ODOE decide if it fits with their general fish and wildlife habitat protection standards or their threatened and endangered species standard. Either way,<sup>15</sup> we will make it clear that Idaho Power and the B2H project cannot comply with the above statutes and standards nor the federal ones (cited below.)

## **1. Riparian Habitat, Category-1 Watershed/Habitat and T&E species**

Idaho Power’s application for the Boardman to Hemingway Transmission Line project (B2H), ODOE’s Draft Proposed Order, and the project’s fish passage plan, do not adequately protect wild and threatened fish or their habitats. Therefore, the project does not comply with the statutes and rules outlined above.

Both of the proposed routes in Union County for the Boardman to Hemingway Transmission Line project include a crossing of the Ladd Creek and/or its tributaries. Ladd Creek flows approximately 14 miles through the Wallowa Whitman National Forest and private land on the east side of the Blue Mountains, into the Ladd Marsh Wildlife area, connecting with Catherine Creek and the Grande Ronde, Snake, and Columbia Rivers.

Historically, there were anadromous fish (steelhead and salmon returning from the ocean) in Ladd Creek. ODFW has documented that steelhead and salmon used Ladd Creek for spawning. However, construction of Interstate 84 in the 1970’s stopped the passage of these fish above the interstate due to a vertical culvert being installed (see [Power Point “Ladd Creek Fish Passage Project - ODOT FTP”](#)).

The Oregon Department of Fish and Wildlife’s Mission is to protect and enhance Oregon’s fish and wildlife and their habitats for use and enjoyment by present and future generations. The department is the only state agency charged exclusively with protecting Oregon’s fish and wildlife resources. The state Wildlife Policy (ORS 496.012) and Food Fish Management Policy (ORS 506.109) are the primary statutes that govern management of fish and wildlife resources.

The B2H Draft Proposed Order (page 9-10 of *draft Fish Passage Plan in ASC Exhibit BB, Attachment BB-2*), states that Ladd Creek and its tributaries contain only local fish (trout), but **that status has changed** due to major culvert work along and under the I-84 interstate in the last 4 years. As a result, the information contained in the B2H Draft Proposed Order is incorrect and out of compliance with Oregon and Federal statutes.

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<sup>15</sup> And while ODOE and EFSC have stated that they are not required to address federally listed species under **345-022-0070**, according to legislative council per memo: [Barreto](#), they are still required under OAR 345-022-0060 to identify and protect those species.

In 2015, ODOT completed a 2-year project to replace culverts that previously had blocked fish passage in the creek and at the I-84 crossing of Ladd Creek (see <https://www.lagrandeobserver.com/csp/mediapool/sites/LaGrandeObserver/LocalState/story.csp?cid=4108250&sid=824&fid=151>).

According to ODFW Fish biologist Tim Bailey, in the year after completion of the fish passage project (2016) a steelhead redd was documented above the culvert, upstream from the freeway.

ODOT has continued this fish passage project in 2019 along with plans for freeway reconstruction and additional traffic lanes (see <https://www.constructionequipmentguide.com/odot-works-to-improve-i-84-fish-passage-in-ladd-canyon/45648>). Construction has resulted in costs over 32 million dollars, and the list of agencies and individuals in support of this costly fish passage project include ODFW, Union County Board of Commissioners, The Grande Ronde Model Watershed, the US Army Corps of Engineers, Senator Jeff Merkley, Senator Ron Wyden, and the National Marine Fisheries Service (see <https://www.oregon.gov/odot/projects/pages/project-details.aspx?project=20381>) and attached ([PPT] Ladd Creek Fish Passage Project - ODOT FTP).

An entire watershed is protected when it is determined that it contains federally threatened or endangered fish species. Idaho Power in its application and the B2H Draft Proposed Order have failed to incorporate information regarding identification of the habitat category or locations which will be impacted by the proposed B2H powerline development. Critical habitat is specifically identified in the federal law recording the listing of threatened species (ESA). The current application and site certificate fails to include requirements that would assure that the state is complying with federal laws in providing habitat protection for listed species (salmon and steelhead).

Idaho Power has two proposed line routes across and through Ladd Canyon, a preferred and an alternative. Idaho power has also stated that because there are only resident fish in Ladd Creek that “No new fish passage plan anticipated” (page 9-11 of *draft Fish Passage Plan in ASC Exhibit BB, Attachment BB-2*).

Because the alternative route through Ladd Canyon would necessitate a 3a/3b design change for a bridge crossing on Ladd Creek and there are threatened anadromous fish in Ladd Creek, an ODFW fish passage plan will need to be implemented (OAR 17 412-0035) based on (OAR) 635-412-0020 for this route for Ladd Creek and its tributaries.

The B2H Draft Proposed Order contains the following outdated information:

1. In *Table 1. Road-Stream Crossing Ownership, Risk Summaries, Proposed Crossing Types, and Fish Passage Information* Idaho Power names 5 waters in the Ladd Creek area (page 9-11 of *draft Fish Passage Plan in ASC Exhibit BB, Attachment BB-2*) with stream crossings. The report states that the only fish in these waters are resident fish. This information is incorrect.

2. The B2H Draft Proposed Order states that for all of Ladd Creek and its tributary streams that “No new ODFW fish plan anticipated.” (page 9-11 of Attachment BB-2). It cannot be overemphasized that this information is incorrect.
3. The alternative route Idaho Power has chosen will necessitate a 3a/3b (page 11 BB-2) design change for a bridge crossing on Ladd Creek. If this route is chosen, this will trigger an ODFW fish passage plan to be implemented (OAR 17 412-0035) based on Oregon Administrative Rules (OAR) 635-412-0020. Again, the B2H Draft Proposed Order information is incorrect.

Because of the change of status of the fish population in Ladd Creek, the B2H Draft Proposed Order is out of compliance with several Federal and State laws including:

1. *ORS 509.580 through 509.910: Fish Passage; Fishways; Screening Devices; Hatcheries Near Dams*
2. *OAR 635-41-0005 through 635-412-0040: Fish Passage*
3. *Oregon Forest Practice Administrative Rules and Forest Practices Act, OAR Chapter 629 (ODF 2014)*
4. *Forest Practices Technical Note Number 4, Fish Passage Guidelines for New and Replacement Structures (ODF 2002)*
5. *Fish and Wildlife Mitigation Policy (OAR 635-415-0000 ), which states that :*

(a) The mitigation goal if impacts are unavoidable, is no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality.

(b) The Department shall act to achieve the mitigation goal for Category 2 habitat by recommending or requiring:

(A) Avoidance of impacts through alternatives to the proposed development action;

or

(B) Mitigation of impacts, if unavoidable, through reliable in-kind, in-proximity habitat mitigation to achieve no net loss of either pre-development habitat quantity or quality. In addition, a net benefit of habitat quantity or quality must be provided. Progress towards achieving the mitigation goals and standards shall be reported on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development action.

(c) If neither 635-415-0025(2)(b)(A) or (B) can be achieved, the Department shall recommend against or shall not authorize the proposed development action.



The B2H Draft Proposed Order contains an improper evaluation of the potential long term negative impacts to the fish habitat in the Ladd Creek drainage, including surrounding creeks, given the fact that species listed as threatened under the Endangered Species Act which requires identification and address of the effects of the proposed action through ESA section 7(a)(2) consultation with the NMFS (anadromous fish species) are in Ladd Creek and its tributaries.

Hence, the applicant has **failed to meet the requirements for issuance of a Site Certificate contained in OAR-345-022-0060 and 354-022-0070, and the Idaho Power's B2H proposed action's permit, being not in compliance with state or federal protected species laws, should be denied.**

The applicant has also failed to identify and address the effects of the proposed action on, not only the listed species, but the Category-1, and Federal Designated Critical Habitat. A co-sponsor of the project, Bonneville Power administration, is also a party to the Federal Columbia River Power System (FCRPS) Biological Opinion, requiring them to promote conservation and recovery of Federally-listed, under the Endangered Species Act, salmon and steelhead in the interior Columbia Basin.

The Draft Proposed Order (DPO), p. 304, lines 20-26, fails to list Bull Trout, a listed State-Sensitive Threatened Species, also listed as Threatened by USFWS. Similarly, the DPO only gives brief identification of federally listed Mid-Columbia River and Snake River steelhead, and Snake River spring/summer and fall Chinook salmon. OAR-345-021-0010 (1)(p) requires identification of all fish and wildlife at the proposed location, and identification of habitat classification categories, as set forth in OAR-635-415-0025, in order to comply with OAR-345-022-0060, requiring identification of habitat categories and required mitigation.

Compliance with the federal Endangered Species Act (ESA) requires identification and address of the effects of the proposed action through ESA section 7(a)(2) consultation with the NMFS (anadromous fish species) or USFWS (resident fish species.) ODOE is required to consult with ODFW, who consult regularly with their federal counter-parts regarding these matters. The DPO does not make this clear, hence fails this requirement.

Additionally, the DPO does not adequately address the adverse impacts to federally designated critical habitats (DCH.) DCH for Snake River spring/summer Chinook salmon is identified as “all areas with historical presence”, and is NOT found only where they exist today. DCH ESA determinations of ‘may effect’ are linked to the standing PACFISH riparian habitat conservation areas (buffers) on both BLM and USFS lands. This equates to a 300-foot buffer on main rivers, and a 150-foot buffer on perennial tributaries (100-foot buffer on intermittent streams). The DPO speaks to only stating there will be no roads below ‘ordinary high-water mark.’ This in no uncertain terms addresses the Primary Constituent elements of the DCH for salmon OR steelhead.

The U.S. Fish and Wildlife Service maintains that conservation of bull trout and other salmonids depends upon the PACFISH and INFISH programs. The applicant has failed to comply with both federal and state requirements to address adverse effects of the proposed action on identified threatened (state or federal designation) fish species and their habitats!

The Grande Ronde River watershed contains a well-documented population of Bull Trout, Snake River steelhead, and Snake River spring/summer Chinook salmon. By state statute, wherever a portion of a watershed contains a Threatened or Endangered species, the entire watershed is reviewed for its potential impacts to those species under federal protection. The Grande Ronde River watershed encompasses the entirety of Union County and the majority of Wallowa County. As evaluated in the DPO, ASC Exhibit P, suitable habitat used by state-listed Threatened and Endangered species is designated pursuant to ODFW's Habitat Mitigation Policy, and EFSC's Fish and Wildlife Habitat standards, as Category-1 Habitat, where any impact, direct or indirect is prohibited. There is NO mitigation for Category-1 Habitat! And given the DPO does not address federal ESA consultation requirements, it too, is out of compliance and undercutting the purpose of this federal law.

All of the alternatives for the B2H Project being evaluated have the potential to adversely affect the region's sensitive aquatic resources, particularly the most northern segments which cross important habitat for federally and state protected salmonids, including bull trout and bull trout critical habitat. Although developed originally as interim measures, PACFISH and INFISH were extended administratively to have indefinite effect and remain the accepted standard for best practices in the conservation and restoration of aquatic ecosystems. These aquatic conservation strategies therefore must be applied wherever project activities intersect with the habitat of the region's native fish.

Responsible development should protect ecologically-significant natural communities and landscapes so that species and ecosystems retain the resilience and adaptive capacity necessary to persist in a rapidly changing environment. Kiesecker and others make the case for the integration of the "mitigation hierarchy" into the planning and siting of energy development projects (Kiesecker *et al.* 2010). The steps of the "mitigation hierarchy" are as follows: avoid, minimize, restore, and mitigate with the goal of "no net loss" of biodiversity from an infrastructure project. In applying the mitigation hierarchy every effort should be made to avoid impacts to the region's biodiversity. Conserving the integrity of natural communities by avoiding sensitive areas is more effective ecologically and economically than trying to restore a place after it has been degraded.

The B2H Project alternatives under review violate this common-sense approach to responsible development as the alignments all include multiple crossings of sensitive steelhead spawning habitat as well as alignments that run adjacent to spawning streams (*e.g.*, Grande Ronde River) (data from StreamNet downloaded 12/2016). Although the review and analysis conducted attempts to address these obvious adverse effects on state and federally protected species, it leaves an unacceptable amount of uncertainty regarding actual site-specific avoidance and mitigation strategies.

The DPO, p. 304, line 32, through p. 307, line 21, acknowledges that there will be impact, but is unable to quantify it. Since any impact is prohibited for Category-1 Habitats, the magnitude of impact becomes irrelevant, rather, not lawful. Hence, the applicant has failed to meet the requirements for issuance of a Site Certificate contained in OAR-345-022-0070 and OAR 345-022-0060. Idaho Power's B2H proposed project will not be in compliance with state nor federal protected species laws.

## *Climate Change Considerations for the B2H Project*

It is well recognized within the scientific community that the Earth's climate has warmed steadily during the 20th century, a trend that is expected to continue and even accelerate well into the 21st century (Intergovernmental Panel on Climate Change 2007). The climate in the western United States has followed the global trend but at an accelerated rate (Saunders *et al.* 2008), driving a series of environmental changes that have far-reaching implications for all ecosystems, including aquatic. While the B2H Project cannot alter these climate trends, it must take into account the impact of climate change on the landscapes that will be affected by construction of the powerline. A more detail discussion of climate change and carbon sequestration was above in Section 6. Geology, Soils, Climate.

As cold-water dependent species, salmonids are particularly vulnerable to rising temperatures and changes in disturbance regimes (Williams *et al.* 2009). Although salmonids have been around for over 10,000 years and have survived glacial advances and retreats as well as countless natural disturbances, the life history strategies that gave them such resilience have been drastically compromised through the degradation, fragmentation, and conversion of their historical habitat. Their extraordinary migratory ability enabled them to take advantage of suitable habitats and move when a fire or drought rendered their habitat unsuitable. Now, however, barriers, non-native species, and degraded water quality have significantly limited their ability to move leaving them highly vulnerable to disturbance events.

The direct effects on aquatic systems from the B2H Project will be exacerbated by climate change and may potentially lead to greater adverse impacts on these natural systems. The four climate-driven environmental changes that are of particular concern to native salmonids are rising summer temperatures, increased winter flooding, increased wildfire risk, and protracted drought (Haak *et al.* 2010). The potential interactions between each of these factors and the B2H Project activities are discussed briefly below.

*Rising summer temperatures:* Loss of riparian cover will exacerbate thermal heating, particularly in the low water summer months. Alterations to the stream channel that increase the width-to-depth ratio will also increase warming while any loss of deep pools or other micro- habitats due to sedimentation or channel or streambank alterations will reduce available cold water refugia for local salmonids. As noted below, preserving large trees in the riparian area through application of the "Eastside Screens" can provide a source for large woody debris in the channel as well as an anchor for stream banks to prevent bank erosion and channel widening.



*Increased winter flooding:* As rain-on-snow events continue to increase in the Northwest, many rivers are experiencing a high frequency of extreme winter flood events. These events often result in channel scouring and degraded habitats since rivers have been disconnected from their floodplain and have no release valve for these high flows. Construction of roads and other infrastructure should not impede the movement of water from the stream channel to the floodplain during flood events. Culverts must be sized to accommodate flood flows so that they do not constrict high flows and contribute to further degradation of the stream channel during a flood event.

*Increased wildfire risk:* Healthy riparian areas and wet meadows are important to the protection of aquatic systems during wildfires. These moist areas often protect isolated populations of fish from direct mortality due to fire and help to diffuse the impacts of post-fire flood events. Removing riparian cover will increase the risk of direct mortality of fish as well as habitat loss when a wildfire occurs. As noted above, preserving large fire tolerant trees as required by the Eastside Screens can help to reduce the fuel load and reduce the intensity of wildfires.

*Protracted drought:* Widening of the stream channel, increased sedimentation, and degradation of wetlands and springs will accentuate the impacts of drought and low summer base flows. Culverts should be designed to allow for fish passage during low flow.

#### *Watershed-scale Cumulative Effects*

The ASC describes site-specific activities (*e.g.*, tower construction, roads) that may impact aquatic systems. However, it fails to take into account cumulative effects at the watershed-scale as well as the exacerbating effect of climate change on degraded habitats and altered ecosystems.

The USFS and BLM have each adopted macro-scale frameworks (Watershed Condition Framework and Rapid Ecological Assessments, respectively) to incorporate cumulative effects and climate change into their local and regional planning efforts. The B2H Project should also be required to take these factors into account in any environmental analysis of project impacts.

The proposed project and necessary amendments to the WWNF LRMP (Wallowa-Whitman National Forest Land and Resource Management Plan) to remove PACFISH and INFISH protections are unlawful because the design and mitigation measures for fish resources never account for cumulative impacts at the watershed scale. This is contrary to best practices for aquatic conservation where it has long been recognized that overall watershed health is directly related to the health of the fisheries it supports, regardless of whether or not they occupy all of the streams within the watershed (Williams et al 1997).

In analyzing cumulative effects on fisheries within a watershed, all construction related activities should be accounted for, not just those that directly intersect a stream segment. Road densities within a watershed have been found to have a strong correlation with the health of aquatic systems so all new and “improved” roads should be taken into account when assessing aquatic impacts. The same should be done for the construction of towers and other supporting infrastructure that results in a surface disturbance, regardless of where it is in the watershed.

In the Second Amended Project Order, Table 2, Analysis Areas, the department is only requiring the developer to analyze “the area within the site boundary” for Fish and Wildlife habitat (Exhibit P) and only within a half-mile of the site boundary for Threatened and Endangered Species (Exhibit Q.) This is completely unacceptable!

In view of the above discussion, especially the fact that **Category 1 habitat cannot be mitigated**; millions of federal, state and local resources have been spent in fish recovery, habitat mitigation and habitat restoration for the recovery of the area’s Bull Trout, SR-steelhead, and SR s/s Chinook salmon populations; and with the current and projected compounding effects of climate change, issuance of a **Site Certificate by the State of Oregon must be denied**.

## **2. Vegetation and Noxious Weeds**

With regard to listed plant species, sensitive plant species, spread of noxious weeds, and traditional and ethnobotanical resources, the ASC and DPO rely on stale data and several unsubstantiated, underlying assumptions regarding future actions on private and public lands and under-estimates the eventual residual impacts of the project. It also reveals a lack of attention to under-studied groups, and an assumption of reliance on overly optimistic mitigation expectations.

Noxious weeds and their threat to native vegetation are grossly underestimated and an overreliance on herbicides for controlling these weeds (mitigation), leave other native species and invertebrates at an even greater risk. Global climate change and noxious weeds constitute significant threats to many native vegetation communities and the co-dependent species that they support. Further fragmentation and degradation of these already imperiled ecosystems likely will result in unrecoverable losses of biodiversity and valuable ecosystem functions across a wide area of eastern Oregon.

Idaho Power's faulty and illegal "Noxious Weed Plan" (DPO Attachment P 1-5) as well as their failure to take into account in any way, the Oregon Conservation Strategy, makes it difficult to see how ODOE can state that the developer has complied with the rules and statutes cited above.

The Oregon Conservation Strategy <http://oregonconservationstrategy.org/overview/> "*represents Oregon's first overarching state strategy for conserving fish and wildlife. It uses the best available science to create a broad vision and conceptual framework for long-term conservation of Oregon's native fish and wildlife, as well as various invertebrates, plants, and algae. The Conservation Strategy emphasizes proactively conserving declining species and habitats to reduce the possibility of future federal or state listings. It is not a regulatory document but instead presents issues, opportunities, and recommended voluntary actions that will improve the efficiency and effectiveness of conservation in Oregon.*"

Under the Oregon Conservation Strategy, IPC's B2H project is a Key Conservation Issue: "*(KCI)s are large-scale conservation issues or threats that affect or potentially affect many species and habitats over large landscapes throughout the state.*"

Despite being a Key Conservation Issue, the Oregon Conservation Strategy and its Goals, are not mentioned in IPC's Application at all! Consider Land Use Planning Goal 1: *Manage land use changes to conserve farm, forest, and range lands, open spaces, natural or scenic recreation areas, and fish and wildlife habitats.* Neither the current Proposed Route nor Morgan Lake Alternative of IPC's Application to EFSC takes these into account. Even if we ignore the fact that the B2H Project likely is not needed at all, given lowered demand and improved technology of energy storage batteries—IPC intends to disregard the "Proposed Route" considered in the BLM/USFS Records of Decision. That "Proposed Route" was chosen by the agencies as being the least harmful to the greatest list of resources—yet IPC has abandoned that in favor of two other routes imminently MORE harmful and despised by MOST residents of Union County. Is Goal 1 being met when the B2H line goes less than 100 feet from Twin Lake, a gem of a wetland that deserves protection? Is Goal 1 being met when B2H goes through Rice Glass Hill property, proposed as a State Natural Area? Is Goal 1 being met when noxious weeds are spread by B2H through Union County's finest wet meadows and elk wintering habitat?

No, Goal 1 one is not being met. Another very specific example is 5 State listed rare plant species (DPO Exhibit Q) within the B2H "analysis area." IPC claims "only" two of these rare species (Mulford's milkvetch and Snake River goldenweed) will suffer "direct impacts," by blading with heavy equipment. IPC claims that, "Avoidance and minimization measures ...described in Section 3.5.4" will "mitigate" impacts. Upon reading 3.5.4 we find that this consists of "minimum buffer of 33 feet between the disturbance and the edge of the T&E occurrence". Habitat for these plants will be completely fragmented and a buffer of 33 – or even a few hundred--feet will not stop invasion by noxious weeds! These species will suffer irreparable damage under B2H. The Oregon Conservation Strategy rightly recognizes, "Invasive species



are the second-largest contributing factor causing native species to become at-risk of extinction in the United States.”

To delve further into rare plants slated for damage by B2H, *Trifolium douglasii* is a USFWS “Species of Concern” <https://www.fws.gov/oregonfwo/Documents/OregonSpeciesStateList.pdf> yet not even considered in IPC’s 3.5 “Avoidance to Minimize Impacts”. Although List 1 under ORBIC’s latest ranking <https://inr.oregonstate.edu/orbic/rare-species/ranking-documentation/vascular-plant-ranks> it is not shown as State listed Threatened or Endangered, so is ignored by IPC. Species of Concern are “Taxa whose conservation status is of concern to the U.S. Fish and Wildlife Service (many previously known as Category 2 candidates), but for which further information is still needed.” Douglas clover has a global rank of G2 “*Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (extirpation), typically with 6-20 occurrences*”. DPO Exhibit P Part 2b Appendix 3A and 3B Figure 9 of 23 shows Douglas clover directly on the Morgan Lake alternative. This is not even taking into account that areas of private land where access was not granted for survey, likely contain additional occurrences of Douglas clover. The area is THE main place where this rare plant grows in Oregon, and B2H is set to permanently alter and compromise its main habitat with weeds!

Another very obvious lack is IPC’s failure to discuss Strategy Habitats, outlined in Oregon’s Conservation Strategy: <http://oregonconservationstrategy.org/strategy-habitats/strategy-habitats-summary-by-ecoregion/>.

In Union County alone, the Strategy Habitats of Grasslands, Late Successional Mixed Conifer Forest, and Ponderosa Pine Woodlands would very obviously be impacted by B2H as proposed in the Application.

The Application also neglects to address Strategy Species under OCS “*The Conservation Strategy identifies 294 Strategy Species, which are Oregon’s “Species of Greatest Conservation Need”. Strategy Species are defined as having small or declining populations, are at-risk, and/or are of management concern.*” This is completely unacceptable! How can an action set to devastate so many of Northeast Oregon’s Strategy Habitats and Species not even respond to our State Conservation Strategy?

Moving on to invasives, IPC’s “Noxious Weed Plan” is greatly lacking and is described in detail in the next section. As noted above, it is a threat to Oregon’s native plant communities. Oregon’s Conservation Strategy states “*Invasive non-native species can have many negative consequences throughout Oregon. Depending on the species and location, invasive plants can:*

- *affect food chain dynamics*
- *change habitat composition*

- *increase wildfire risk*
- *reduce productivity of commercial forestlands, farmlands, and rangelands*
- *modify soil chemistry*
- *accelerate soil erosion*
- *reduce water quality”*

Chapter 569 of Oregon law covers weeds. Oregon statute 569.180 (Noxious weeds as public nuisance policy) states, “In recognition of the imminent and continuous threat to natural resources...noxious weeds are declared to be a public nuisance and shall be detected, controlled and, where feasible, eradicated on all lands in this state.”

Upon careful reading, “Noxious Weed Plan” breaks the law by exempting IPC from weed control after 5 years, denying responsibility for Class B and C Weed species (the vast majority of weeds), and holding IPC accountable for only the very limited area of ROW, despite the B2H project introducing and spreading weeds far and wide along a 300 mile stretch plus dozens of additional access roads and tensioning areas.

In summary, IPC’s Application does not take into account the Oregon Conservation Strategy. The Application clearly is breaks Goal 1 of the Strategy in many ways; additionally the Application imperils a Federal “Species of Concern”, and does not consider Strategy Habitats or Strategy Species. IPC’s Noxious Weed Plan does not comply with Chapter 569 of Oregon law. Our State Conservation Strategy and Goals and the integrity of our native plant habitats and rare plant occurrences cannot be sacrificed!

### ***Noxious Weed Plan impacts on native species and wildlife habitats***

With regards to Exhibit P, IPC’s “Noxious Weed Plan” (DPO Attachment P 1-5) is vastly inadequate and presents a threat to Oregon’s native plant communities/wildlife habitat, promotes risk from wildfire, and presents a public menace. Oregon statute 569.180 (Noxious weeds as public nuisance policy) states, “In recognition of the imminent and continuous threat to natural resources...noxious weeds are declared to be a public nuisance and shall be detected, controlled and, where feasible, eradicated on all lands in this state.” Chapter 569 of Oregon law covers weed control

[https://www.oregonlegislature.gov/bills\\_laws/ors/ors569.html](https://www.oregonlegislature.gov/bills_laws/ors/ors569.html) including obligation of land occupant:

**569.390 Owner or occupant to eradicate weeds.** Each person, firm or corporation owning or occupying land within the district shall destroy or prevent the seeding on such land of any noxious weed within the meaning of ORS 569.360 to 569.495 in accordance with the declaration of the county court and by the use of the best means at hand and within a time declared reasonable and set by the court, except that no weed declared noxious shall be permitted to produce seed.

Excellent Comments were provided in “B2H Noxious Weed Plan Comments” by a large group of weed professionals, submitted by Brian Clapp of Union County. The document states, “The County Weed Supervisors of Morrow, Umatilla, and Union counties met with the Oregon Dept. of Ag and Tri-County CWMA on August 22, 2017 to go over the B2H Attachment P1-5 Noxious Weed Plan. In conjunction with comments from previous meetings with Malheur and Baker county weed supervisors, the following list of concerns was developed...”. Upon comparing these comments with IPC’s Noxious Weed Plan of 2018 (Attachment P1-5), it is shocking to find that IPC’s Noxious Weed Plan does NOT include the suggestions made by the weed managers.

The foremost item cited by weed managers in 2017 was IPC’s excluding themselves from responsibility for the FULL list of weeds. In 2018, IPC’s Weed Plan still only obligates IPC to control weeds in Class A and Class T lists. It is widely recognized that these weed “Classes” are determined according to agricultural priorities, not according to which weeds are the biggest threats to natural areas. Treating only Class A and T, a shorter list of weeds which are not very common, is especially devastating for natural areas, i.e. the vast majority of the proposed B2H routes. Any invasive plant can devastate an area—regardless of which “list” it is on. In fact, Class B and C weeds are generally the worst weeds and tend to be those which are spreading most aggressively and to more areas, thus threatening and ultimately devastating the most native habitat. The Weed Managers Comments of 2017 state, “every landowner and land manager is responsible for the control of ALL state and county listed noxious weeds on their property/ ROW. Whether the weeds have been here for 50 years or don’t show up till the 20<sup>th</sup> year of Operation, IPC will be held responsible for the control of noxious weeds in the areas they manage—the same as everyone else.” IPC has offered nothing in response.

As an example of serious weeds that would be excluded according to IPC, two of the worst weeds which occur in the vicinity of the Union County portion of Proposed and Alternate routes, *Leucanthemum vulgare* (ox eye daisy) and *Rosa rubiginosa* (sweet briar rose) are not included in Table 1 of the Weed Plan “Designated Noxious Weeds”. These species are listed in Union County Class B <http://union-county.org/wp-content/uploads/2017/04/Union-County-Weed-List-2019-and-cost-share-Ad.pdf>. Other “Class B” list weeds include sulphur cinquefoil, whitetop, diffuse and spotted knapweed – all present in the proposed areas of disturbance and certain to spread to currently intact native plant communities, should B2H construction proceed. These weeds, which are even now devastating thousands of acres of native plant communities, would not be treated under their Weed Plan – and neither would any of the other dozens of species on Class B and C lists, or new invasives, which may take some time to be added to a list. Union County Class “B” list alone includes 24 noxious weeds. Other landowners are required to follow County and State laws and control ALL noxious weeds. Why should Idaho Power be exempt?

Weed Surveys provided in Exhibit P-1 part 2a and b are misleading; many species which would not be controlled by IPC under their “Weed Plan” are included in the surveys. Surveys were done between 3-8 years ago, a very long time in terms of weed spread. Surveys done so long ago using an outdated list and in such an artificially limited area are not acceptable.



In addition to exempting themselves from the full list of weeds, IPC's Post Construction treatments is otherwise ridiculously limited and unacceptable. In fact it would be unbelievable the State Weed Program would sign off on it. Perhaps they did not. Here is an excerpt from their Plan (Monitoring 6.1):

*As stated above, noxious weed monitoring and control will occur during the first 5-year period. When it is determined that an area of the Project has successfully controlled noxious weeds at any point during the first 5 years of control and monitoring, IPC will request concurrence from ODOE. If ODOE concurs, IPC will conclude that it has no further obligation to monitor and control noxious weeds in that area of the Project. If control of noxious weeds is deemed unsuccessful after 5 years of monitoring and noxious weed control actions, IPC will coordinate with ODOE regarding appropriate steps forward. At this point, IPC may suggest additional noxious weed control techniques or strategies, or may request a waiver from further noxious weed obligations at these sites.*

Anyone who has tried to control weeds will realize that by treating weeds only once per year, many will be missed and weeds will spread. Noxious weeds cannot be "successfully controlled" in 5 years. IPC would appeal to ODOE to claim areas of the "Project" had "successfully controlled weeds", and then be exempted from further responsibility--- while invasives return later. The Plan further states "if control of noxious weeds is deemed unsuccessful...IPC will coordinate with ODOE regarding appropriate steps forward," including "request a waiver from further noxious weed obligations". Essentially IPC comes by once per year for 5 years at most, inevitably fails in weed control, and is ultimately not responsible. Landowners are burdened with more weed control, and our ever-shrinking valuable native plant communities are compromised or eliminated, leaving native animals without habitat.

IPC's Plan states they are not responsible for "areas outside of the ROW." Weed sites immediately outside areas of potential disturbance are highly likely to spread to the disturbed areas but would not be recorded. Noxious weeds spread quickly, often exploding exponentially in a single season. IPC is proposing a huge area of disturbance; their responsibility should not be limited to the ROW.

As IPC has proposed only annual treatments, one can surmise they would use primarily residual herbicides. Residual herbicides may seem like the answer to the dilemma of weeds constantly in seed production. Herbicides such as aminopyralid and imazapic have become the herbicides of choice for many species. Local residents have been using these herbicides for over 3 years now and have found they prevent germination for up to 3 years following application in eastern Oregon. This means germination of native plants as well as weeds. Bare spots are created where weeds once were. Revegetation by anything at all is prevented. After 2-3 years when the soil born chemical is reduced, weeds pioneer the site. In addition, native plants next to the weeds can die as a result of root uptake of the herbicide even though they were not sprayed directly. When using aminopyralid, willows, aspen, conifers (especially larch) and

desirable native forbs in certain families are often killed in this way. Successful revegetation very unlikely. Since IPC is proposing to treat weeds for only 5 years, it is very likely a couple of treatments using residual herbicides would suppress weeds for that time, only to explode on the – now bare—areas once occupied by valuable native plants.

In summary, IPC's Noxious Weed Plan does not comply with Chapter 569 of Oregon law. IPC denies responsibility for control of most weed species, denies responsibility for weed control after 5 years, controls weeds only annually, and even allows them a waiver when control has failed. This is unlawful and completely unacceptable. EFSC should reject the Weed Plan and Application. As a condition of re-applying, IPC should be required to post a bond to secure weed management for the lifetime of the project, which they claim is 45 years. Much is at stake, and there is no going back when thousands of acres of native plant communities are lost to invasives.

***Noxious Weed Plan impacts and costs to farms and forest owners, county services and resulting degradation of fish and wildlife habitats***

The applicant has not established a weed control plan that will protect the adjacent farm, wetlands, native habitats and forests from infestations due to the transmission line providing for noxious weed introduction and stimulation.

Failure to control noxious weeds will result in a failure to comply with OAR 345-022-0110 as it will result in significant adverse impacts to the ability of the county and private providers within the analysis area to provide those services as well as significantly increase the costs to private farm and forest owners to control noxious weeds.

The current plan fails to comply with the following general rules and statutes which apply to the entire siting process:

- Oregon Revised Statute 469.507 requires the site certificate holder to not only establish programs for monitoring the environmental and ecological effects of the construction and operation of the facilities, but also requires the certificate holder to perform testing and sampling necessary for the monitoring program per guidelines established by the EFSC or its designee.
- OAR 345-021-0010(l)(u)(E) Identifies the need for establishing a monitoring program to establish the identification of conditions which impact the providers ability to provide required services. (This statute and rule make it clear that the Department of Energy and EFSC have the authority and obligation to establish in site certificate conditions and requirements for monitoring of those programs.)

- Failure to comply with both OAR 345-022-0070 and OAR 345-022-0060 due to the negative impact invasive weeds have on the ability of the habitat to support wildlife species due to changes in the types of food available to species and the fact that invasive species clog waterways necessary for threatened and endangered fish.
- Fails to comply with OAR 345-022-0090 due to the fact that invasive weeds push out "first foods" species relied upon by Native Americans. Please refer to the comments submitted by the Shoshone-Bannock Tribes, pages 5 and 6 identifying concerns with noxious weeds and the need to address them at all locations impacted by the development, as well as the need for vehicle cleaning.

Comments provided by the Oregon Department of Fish and Wildlife state the need to address the introduction and spread of noxious weeds during the entire life of the project. OAR 345-025-0016 states, "In the site certificate, the council shall include conditions that address monitoring and mitigation to assure compliance with the standards contained in OAR Ch 35, Div. 22 and Div. 24. Given the speed with which invasive weeds can cause significant damage to surrounding habitat as well as agricultural and forest lands, the need exists to monitor and control noxious weeds on an annual basis during the life of the project.

The following examples identify shortcomings in the DPO and Noxious Weed Plan to meet the requirements of the above rules and statutes.

1. Construction and ongoing maintenance of the transmission line will introduce and stimulate the development of multiple noxious weed varieties which pose a threat to public and private property for many miles adjacent to the transmission line. Some seeds disperse for hundreds of miles. A failure to identify and treat noxious weeds prior to them dispersing seeds onto adjacent properties is a critical component of effective treatment to avoid these impacts. State law contained in ORS 569.390 requires the developer to treat weeds prior to seed dispersal; ORS 569.400 provides penalties for failure to do so.

ORS 569.445 requires developer to clean machinery prior to moving it over any public road or movement from one farm to another. The statute requires cleaning to occur at the locations where equipment leaves or enters a public road or moves across a property boundary. Utilizing washing facilities located at multi-use areas or public facilities, at a distance away from the work site, will not be consistent with the state statutes which the Oregon Department of Energy and Energy Facility Siting Council are required to adhere to.

2. The site certificate needs to include a monitoring schedule during the spring and summer periods of rapid growth that will address the actual invasive weeds along the right of way. Since different weeds go to seed from early spring through late fall, in order to meet the requirements of the



statute, the monitoring plan must address the life cycle of the weeds potentially present at different locations along the right of way to assure weeds are identified and treated prior to seed dispersal. This would require visual inspections to occur based upon the timeframes for specific weeds to develop.

Multiple examples are provided for Category A weeds which occur along the proposed transmission line. For example, flowering and seed production for the List A invasive weeds occurs as early as March for Scotch broom and extend into October for Purple loosestrife. These are both on List A. And yet, as discussed in the section above, some of the worst weeds are not even on List A.

3. Section 1.3 of the Draft Plan indicates the following, “IPC will only be responsible for the control of noxious weeds that are within Project right-of-way (ROW) and that are a result of the company’s construction- or operation-related surface-disturbing activities. For EFSC purposes, IPC is not responsible for controlling noxious weeds that occur outside of the Project ROW’s, or for controlling or eradicating noxious weed species that were present prior to the Project. With respect to pre-existing weed infestations, IPC recognizes Oregon Revised State (ORS) Chapter 569 imposes onto occupiers of land within a weed district certain obligations to control and prevent weeds; if IPC identifies pre-existing weed infestations within a Project ROW, IPC will work with the relevant landowner or land management agency to address the same consistent with ORS Chapter 569.” As noted in the August 22, 2017 tri-county comments, mentioned in the section above, IPC is responsible for all weed infestations in the right of way, regardless of whether or not they existed at the time the transmission line right of way is assumed just as any person assuming a right of way would be responsible. This is the law.
4. Section 2.1, Page 4, last sentence in section, states counties were contacted to determine if each county requires specific noxious weed control methods or best management practices. “No specific best management practices were requested by any of the county weed management personnel contacted.” Contrary to this statement, Union County Weed Control submitted 31 comments and concerns developed by the weed supervisors of Morrow, Umatilla, Union County, Dept of Agriculture and Tri-County CWMA and incorporated comments from previous meetings with Malheur and Baker County weed supervisors.

Most of those requirements submitted on August 22<sup>nd</sup>, 2017 do not appear in the draft proposed order or the Draft Weed Management Plan. The site certificate needs to include a condition requiring the Weed Management Plan to include these 31 items. The Draft Proposed Order and Draft Weed Management Plan fail to assure that the counties and private landowners will not sustain significant and ongoing financial consequences due to the failure of Idaho Power to control the invasive weeds which will be introduced and the numbers increased due to the development of this transmission line. It is, therefore, imperative that the counties and private

landowners (farms and timberlands) receive the proposed final Weed Management and Habitat Restoration Plans for their approval prior to being implemented.

5. Section 5.0 repeats the limit of IPC's responsibility. It lists specific areas, which with existing roads, only includes areas involving ground-disturbing construction and/or improvements (e.g. new cutouts.) IPC is responsible for all noxious weeds within the site boundary as well as noxious weed infestations outside the site boundary if the development and/or use of the ROW contributed to the increase in noxious weeds. IPC is responsible for areas of overland travel which they indicate they will be using as well as any weed infestations occurring as a result of IPC use of other roads.
6. Section 5.0, Page 18, also states "IPC is not responsible for controlling noxious weeds that occur outside of the Project ROWs or for controlling or eradicating noxious weed species that were present prior to the Project." IPC states they will work with landowner to deal with pre-existing weeds consistent with ORS Chapter 569. IPC is responsible for all weeds inside the ROW which are there once they assume control of the transmission line corridor. In addition, they are responsible for any increased number or species of weeds that occur as a result of the development action they are proposing.
7. Section 5.2.1 Vehicle Cleaning: States construction contractors vehicles and equipment will be cleaned prior to arrival at the worksite. It fails to require vehicles and machinery to be cleaned prior to moving onto public road or require vehicle and machinery cleaning as construction progresses along ROW and moves from one property owner to another. The plan indicates that will be determined by land management agency and ODOE. The requirement is dictated by statute and the land management agency and ODOE do not have the authority to overrule the statute.
8. Section 5.2.3 " On BLM or USFS land the construction contractor may be required to provide additional treatments to prevent return of noxious weeds where topsoil is removed (i.e., pre-emergent pesticides.)" The Weed Management Plan for Private and State lands needs to include this option as determined by the local weed management supervisor.
9. Section 5.3.2, page 24, paragraph 1 states that Idaho Power will identify areas where preconstruction noxious weed control measures will be implemented. Preconstruction noxious weed control measures need to be implemented wherever noxious weeds exist—not only List A weeds, as mentioned in the above section.
10. 5.3.4 Page 24 states: "Noxious weed control efforts will occur on an Annual Basis for the first 5 years post-construction. When it is determined that an area of the Project has successfully

controlled noxious weeds at any point during the first 5 years of control and monitoring, IPC will request concurrence from ODOE. If ODOE concurs, IPC will consult with ODOE to design an appropriate plan for long-term weed control.

If control of noxious weeds is deemed unsuccessful after 5 years of monitoring and noxious weed control actions, IPC will coordinate with ODOE regarding appropriate steps forward. At this point, IPC may suggest additional noxious weed control techniques or strategies, or may request a waiver from further noxious weed obligations at these sites. If a waiver of noxious weed control is granted, it will include justification for how the waiver is consistent with the appropriate EFSC standards.”

This is repeated in Section 6.1, Page 25. This section does not support management of noxious weeds for multiple reasons including:

- i. During the first five years after construction, weed control needs to occur on a timeline that addresses the weeds present at the location as determined by Idaho Power and the local Weed Supervisor. Annual control does not account for the timing for noxious weed species going to seed.
  - ii. Following the initial 5 year period, noxious weed control needs to occur at least annually for the life of the project as IPC will be using the ROW on an ongoing basis for repairs, monitoring, inspection, vegetation management, etc. In addition, there may be unauthorized uses of the transmission line right of way by such things as ATV’s, hunters, etc. that increase noxious weeds due to the access the developer is providing by building the transmission line. These impacts must be addressed by the developer.
  - iii. Noxious weed control efforts are planned to occur annually for the first 5 years post-construction and can end sooner if ODOE concurs that noxious weeds have been controlled. Noxious weeds will not be controlled absent ongoing monitoring and treatment for the life of the project.
  - iv. No waiver of annual control and monitoring of noxious weeds should occur due to the fact that in a single year, large numbers of plants can occur given that some of these plants disperse at least 900 to 1,500 seeds as the previously referenced plants on the A list confirm.
11. Section 6.2 The annual Noxious Weed Monitoring Report is only planned to be submitted to IPC and ODOE and land management agencies as required. These reports should also be submitted to the County Weed Control Supervisors and private landowners. Idaho Power needs to be designated as the responsible party for completion of things such as annual reports rather than “construction contractors.” If Idaho Power wants to contract with a construction contractor to



complete these for their approval and submission, they have the option of doing that. The contractors will change and there will be no continuity in terms of methodology, reporting, etc.

12. Section 6.3 Ongoing Monitoring and Control. “IPC will be responsible for monitoring and control of noxious weed infestations as set forth in the terms and conditions of the ODOE Site Certificate, BLM ROW grant, and USFS special-use authorization. The BLM, USFS, ODOE, and counties may contact IPC to report on the presence of noxious weed populations of concern within the ROW.” “IPC will control the weeds on a case-by-case basis in consultation with the land management agency and/or landowner, as appropriate.” Following a report of a noxious weed infestation, IPC needs to provide the information including the location of the noxious weed population and consult with the local weed management supervisor to identify an appropriate plan of action.
13. Section 8.0 places responsibility for development of Final Noxious Weed Plan, documentation of existing infestations adjacent to the survey area, documenting results of the preconstruction noxious weed inventories, mapping areas subject to preconstruction noxious weed treatment, and providing a detailed control methodology for each noxious species, etc. to “The Construction Contractors.” Is Idaho Power assuming no responsibility and the accompanying accountability for this program or the results? The developer needs to be listed as the responsible party.
14. Section 3.2 states “existing site-specific disturbances and land uses (e.g. grazing, grading, etc.) that could be contributing to the introduction, spread, or viability of weed populations were also recorded.” This information should only be used to identify areas where the opportunity provided by the construction and operation of the transmission line could provide an opportunity for an increased occurrence of noxious weeds. It should not be used to provide the developer an excuse for not meeting their responsibility for monitoring and controlling weed infestations which are going to be stimulated due to the existence of the transmission line.

The draft weed management plan provides ongoing references which indicate that IPC does not consider themselves responsible for noxious weeds when they are present in areas outside the ROW or when they result from things such as recreational use, grazing, other construction projects, natural occurrences, or when the developer did not physically disturb the area. It needs to be clear that the existence of the transmission line will increase the numbers and species of invasive weeds absent ongoing monitoring and treatment which the developer is required to provide.

15. Section 5.3.1.3, third paragraph, page 22 says herbicide and application rates will be approved by “County Weed Supervisors or Superintendents.” The top of page 23 says “Herbicide will not be applied prior to notification and receipt of written approval from the applicable land management agency, ODOE, or private landowner.” This section appears to allow ODOE to determine what

herbicides are used; and, it appears at least some landowners will have “landowner agreements.” The developer needs to be required to develop landowner agreements with willing landowners and provide written notice to any landowner whose property will be sprayed with chemicals so that the unless there is a landowner agreement, the impacted landowner can determine if chemicals should be used, and if there should be any restrictions based upon the conditions on their land or adjoining land such as organic gardening, necessary setbacks due to flowing water or wetlands, sensitive plant species, etc.

16. Page 23, final paragraph says, “Final species-specific noxious weed control methodologies will be included by the Construction Contractor(s) in the Final Noxious Weed Plan.” The noxious weed plan is the responsibility of Idaho Power and should involve the county weed control agency as well as the landowner.

A failure to manage noxious weeds would result in a significant financial burden being placed upon the county and landowners. Noxious weeds have been identified as the most significant threat to agriculture—and to natural areas as mentioned in the section above. In addition, introduction and increased numbers of noxious weeds in native plant communities and wildlife habitat would reduce the value of this habitat to wildlife dependent upon it and result in wildlife fatalities through starvation or displacement to less desirable habitat.

The application and site certificate lacks conditions that will keep noxious weeds from spreading within the counties and the state. This draft noxious weed plan is not a serious effort to provide mitigation for the negative impacts of the spread of weeds within habitat, native plant communities or on agricultural or forest land. Enhanced involvement of county weed control personnel, private landowners and applicable public interest organizations, in the final planning, may improve the likelihood that a mitigation plan could facilitate the protection of fish and wildlife habitats impacted by this extensive intrusion.

### **3. Forests: Eastside Screens**

The proposed Boardman to Hemingway (B2H) Transmission project would damage rather than protect fish and wildlife habitat in eastern Oregon eco-systems, particularly around and near our Wallowa Whitman National Forest lands. The WWNF has approved plans for land use amendments to enable the project to move forward - which otherwise was not permissible because it violated the current forest management plans. However, the state must also review and make its determination of compliance with the general fish and wildlife habitat mitigation goals and standards as stated above. The dry, fragile, forest habitat will be irreparably damaged by the clearing of trees greater than 21 inches dbh from over 700 acres of the WWNF and allow logging in Late and Old Structure Stands (LOS). The “Eastside Screens” are designed to maintain *all* remnant late and old seral and/or structural live trees greater than 21

inches dbh that currently exist within stands proposed for harvest activities and move vegetative structure that does not meet late and old conditions towards a historic range of variability (HRV).

The Eastside Screens are meant to be a barrier to logging that eliminates the largest trees and related wildlife habitat on Oregon's eastside forests. This would be another project that amounts to a death-by-a-thousand-cuts of the protection for these old trees that would move the WWNF away from, rather than towards, its goal of achieving HRV. As the BLM and USFS's FEIS for the B2H indicates, the WWNF has already approved eleven site-specific amendments to the Eastside Screens. Previous EISs and USFS amendments have cited a specific number of trees greater than 21 inches dbh that have been removed, however the ASC for the B2H to the State of Oregon, provides no information about how many large old trees the logging associated with the B2H project would remove. This is an unacceptable failure to provide relevant information to the public that would allow more meaningful comment than simply providing the number of potentially affected acres.

Given the importance of retaining large, old trees, even the relatively small number of acres involved in the B2H Project's alternatives could result in a significant loss of trees larger than 21 inches dbh. Maintaining the standards for old growth retention as established in the Eastside Screens throughout the project area is important to the mitigation of project impacts on aquatic ecosystems. Although the screens alone will not restore altered ecosystems, the protection of large fire tolerant trees is a necessary step in mitigating the accelerating effects of climate change on natural systems. Preserving large trees in the riparian area through application of the Eastside Screens can provide a source for large woody debris in the channel as well as an anchor for stream banks to prevent bank erosion and channel widening. Preserving large fire tolerant trees as required by the Eastside Screens can help to reduce the fuel load and reduce the intensity of wildfires. The exacerbating effect of climate change on aquatic ecosystems in the project area is discussed in more detail above and in Section 6.

The removal of *any* such trees is inconsistent with current management of the WWNF, and thus inconsistent with the National Forest Management Act (NFMA), 16 U.S.C. §§ 1600–14. But without specific information regarding how many of such trees are likely to be lost, the necessary analysis is incomplete. The project should not be approved or mitigation authorized until the state has confirmed that there are no detrimental impacts to the health of the forest and wildlife that depend on mature stands of older timber.

A similarly narrow analysis and the associated conclusion on the proposed Snow Basin Project in the Wallowa-Whitman National Forest was recently challenged and found to be deficient by a U.S. District Court in *League of Wilderness Defenders, et al. v. Connaughton, et al.*, No. 3:12-cv-02271-HZ (D. Or. Dec. 9, 2014). Plaintiffs challenged the Forest Service's choice to limit its cumulative impacts analysis of a proposed Eastside Screens amendment to only the project area, rather than analyzing the impacts of the project's amendments with all other past, present, and reasonably foreseeable Eastside Screens



amendments allowing logging of large trees within old growth forests across the Wallowa-Whitman. The Court agreed with Plaintiffs and held that the Forest Service's failure to analyze other site-specific amendments throughout the Wallowa-Whitman violated the requirement to take a "hard look" under NEPA. Id. at 17-18. The cumulative effects analysis needs to look at all past, present and reasonable foreseeable amendments to the Eastside Screens. This gives the agency and the public an accurate understanding of the scope and effects of these amendments. Any modeling relevant to total large trees numbers on the forest should disclose what methodology and data are being used to determine the number of large trees that exist on the forest.

#### **4. Invertebrates: Lack of attention to insect species and populations**

No specific data were collected for invertebrate species or population numbers. Native pollinators, which often are obligate foragers on specific native plants, comprise an increasingly important group for urgent conservation. However, many lesser-known insect species share the same risks to their survival. Dr. Karen Antell, Professor of Biology, Eastern Oregon University, La Grande, Oregon, has been conducting an inventory of moth species in Union County since 2013. Through the course of this study, which includes several research sites on Glass Hill, she has documented many species previously unknown to occur in northeast Oregon, and several new records for the State of Oregon. She has provided two specific examples below from recent and ongoing research that serve to demonstrate how little we know about insect populations in eastern Oregon.

*Tetragma gei* is a moth species that was previously known from only six widely scattered locations in Washington, Idaho, and Wyoming. In 2015, Dr. Antell discovered and documented several individuals of this species on private land on Glass Hill, in Union County. This species is obligate on *Geum triflorum* (Prairie smoke), a native forb inhabiting grasslands of the Palouse

Prairie ecosystem. It likely warrants special species status.

Dr. Antell also has collected and documented a species of *Eucosma* (moth) on Glass Hill that likely is an undescribed species new to science. No published records of this species exist, and the extent of its range is entirely unknown.

These are just two examples to illustrate how little we know about invertebrate species and populations in Union County. This lack of information is especially critical for the lands and habitat that the proposed B2H line would traverse. The proposed B2H line would put at risk many species that we have yet to document or develop understanding of their habitat requirements.

In addition to consulting local academics such as Dr Antell, the project developer should be required to collaborate (or at a minimum, consult) its efforts with the Oregon Bee Project. In response to major declines in pollinator populations, the Oregon State House Bill 3362 (<https://olis.leg.state.or.us/liz/2015R1/Downloads/MeasureDocument/HB3362/Enrolled>) was initiated in 2017. The Oregon Bee Project was one result of that House Bill and is a cooperative effort between the Oregon Department of Agriculture (ODA), the Oregon State University (OSU) Extension Service, the Oregon Department of Forestry (ODF), and a diverse set of stakeholders who are actively engaged in caring for our bees.

Together these collaborators and supporters are launching several initiatives to maintain and enhance bee health in Oregon. The Oregon Bee Project has a mission of: “Bringing together Oregonians around a science-based strategy for protecting and promoting wild and managed bees through education, pollinator-friendly practices, and research.” It is essential that the B2H Project include pollinators in their scope of impacts. The B2H Project would result in a loss of pollinator habitat. If the B2H Project should proceed, the project has a responsibility to mitigate the loss of pollinator habitat by including habitat restoration that includes careful selection and planting of plants known to be habitat, nesting sites and floral resources included for pollinating insects. ODOE and EFSC must require the developer to monitor insect populations and the impacts of the B2H Project via pollinator surveys no matter which alternative is chosen. This is especially important as it relates to improving pollinator insect habitat and reducing pesticide exposure to pollinating insects. Given the amount of chemicals proposed for mitigation of noxious weeds, this must be a priority and a condition for EFSC’s recommended mitigation for fish and wildlife habitats under OAR 345-022-0060.

## **5. Over-Reliance on Mitigation and Lack of Mitigation Planning**

EFSC Fish and Wildlife Habitat standard requires the Council to find that the design, construction and operation of a proposed facility is consistent with the Oregon Department of Fish and Wildlife’s (ODFW) habitat mitigation policy, goals, and standards, as set forth in OAR 635-415-0025.

As more and more landscape-altering projects are permitted and constructed, we have come to rely on mitigation for protection of at-risk species and communities. However, mounting scientific evidence shows that mitigation projects cannot guarantee a reasonable level of protection for at- risk native communities.

In their “Washington State Wetland Mitigation Evaluation Study,” the Washington State Department of Ecology concluded that “[o]verall, three projects (13 percent) were found to be fully successful; eight projects (33 percent) were moderately successful; eight (33 percent) were minimally successful; and five

(21 percent) were not successful” and that “[n]o enhancement projects were fully successful, while eight out of nine (89 percent) enhancement projects were minimally or not successful”(Wetland Mitigation Evaluation Study Phase 2: Executive summary, February 2002).

Even with adequate funding and the best intentions, mitigation efforts are subject to vagaries of weather, planning competency, and dedication to long-term control of noxious weeds. In the face of changing climate and habitat fragmentation, reliance on mitigation is nothing more than a last best hope. It should not be relied on as heavily as it appears to be in the DPO.

State goals specify that there should be “no net loss of either habitat quantity or quality” through “avoidance of impacts through alternatives to the proposed development action” or through mitigation. Avoidance of impact is always preferable to mitigation.

OAR 635-415-0025 states the following:

*(b) The Department shall act to achieve the mitigation goal for Category 2 habitat by recommending or requiring:*

*(A) Avoidance of impacts through alternatives to the proposed development action; or*

*(B) Mitigation of impacts, if unavoidable, through reliable in-kind, in-proximity habitat*

*mitigation to achieve no net loss of either pre-development habitat quantity or quality. In addition, a net benefit of habitat quantity or quality must be provided. Progress towards achieving the mitigation goals and standards shall be reported on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development action.*

*(c) If neither 635-415-0025(2)(b)(A) or (B) can be achieved, the Department shall recommend against or shall not authorize the proposed development action.*

Neither 635-415-0025(2)(b)(A) or (B) can be achieved. Both of the proposed routes in Union County, as an example, contain several areas with habitat qualities that do not occur elsewhere in the region. The unique qualities of this area preclude the possibility that “reliable in-kind, in-proximity habitat mitigation” can be accomplished successfully.

With the heavy reliance on mitigation throughout the ASC and DPO, leaving mitigation planning to the future and not including a thorough evaluation and plan for mitigation within the EFSC evaluation process, is not adequate for protection of our fish and wildlife habitats.



## **6. Birds, Raptors, Bats**

Although trees or structures with raptor nests are managed as Category 1 habitat and therefore must be avoided, they are not included in the habitat categorization calculations due to their relatively small size on the landscape (p278 DPO; Fn # 258.) This is completely unacceptable, as the size is not relevant in this instance; and if it were, there would even be more justification to avoid or mitigate. The developer is not in compliance with ODFW rules within OARs chapter 635.

## **7. Mule Deer, Rocky Mountain Elk, and Critical Big Game Habitat**

Significant stretches of the proposed route would be constructed on critical big game winter range. It's difficult or impossible for a member of the public to obtain permission to build a home in critical big game winter range. Yet the B2H project proposes to build large powerline towers and a significant road network in critical big game winter range. Mule deer populations are in decline in Oregon. Winter range for deer and elk is currently reduced in size and acreage compared to historic levels because of existing human development. Further degradation of critical big game winter range for B2H would result in an unacceptable negative impact to these important wildlife species.

Powerline construction over the proposed route would negatively impact high quality elk habitat. The roads associated with B2H construction would negatively affect elk. Elk research science based in northeast Oregon shows the negative impacts of roads on elk habitat. (*M. M. Rowland, M. J. Wisdom, B. K. Johnson, and M. A. Penninger. 2005. Effects of Roads on Elk: Implications for Management in Forested Ecosystems. Pages 42-52 in Wisdom, M. J., technical editor, The Starkey Project: a synthesis of long-term studies of elk and mule deer. Reprinted from the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas, USA*).

## **8. Habitat Connectivity**

Wildlife of all kinds depend on quality habitat. Quality habitat must be connected across the landscape. Connectivity is becoming increasingly important as the effects of climate change are impacted on plants and animals. They must migrate across the landscape as environmental conditions change. Construction of the B2H powerline would create a barrier to the connectivity of habitats. Connectivity is essential for the Greater Sage Grouse discussed below.

## **9. Greater Sage Grouse**

The future of Greater Sage-Grouse survival is unknown at this time for a number of reasons. Clearly conditions have changed since the filing of the application which already makes the biological surveys conducted and the mitigation plans outdated. Also it is likely that the Greater Sage-Grouse Comprehensive Conservation Strategy, 2006, ODFW's OAR 635-415-0025(7) and OAR 635-140-0000 to 0025 will need to be revised.

Climate change and planetary warming are driving rapid environmental change and destabilizing ecosystems creating additional enormous strains and stressors on the habitat of the greater sage-grouse. ([Haak, conservation-portfolio-04172019.pdf](#)) IPC's B2H transmission line construction and maintenance, with its 250' wide clear cut of sage brush under the line, will add additional threats to their survival. As noted in the DPO, page 314, lines 4-9: The proposed facility would include the following facility components within sage-grouse core area habitat: 20.77-line miles of transmission line; 12.85 miles of new access roads; and 12.34 miles of substantially modified existing roads. Habitat fragmentation and loss is a big concern for the overall survival of the species (Haak, conservation-portfolio-04172019.pdf). The Baker and Cow Creek Priority Areas of Concern (PACs), in particular, face extirpation (extinction) as this project creates another nail in their coffin.

There are additional threats to sage-grouse, a threatened species, from the B2H project.

1. Transmission lines and transmission towers cause sage-grouse mortality via bird collisions with the lines and facilitate raptor predation of sage-grouse ([Wisdom et al. Sage-Grouse SAB Monograph 18.pdf Page 17.](#))
2. The 250' clearance of vegetation under the transmission lines will create loss of habitat and the introduction of invasive weeds. Building new roads and substantially modifying existing roads exacerbates the spread of cheat grass. Cheat grass is taking over sage brush habitat which in turns threatens the sage-grouse because the sage-grouse needs large healthy expanses of sage brush to survive. Cheat grass also dries out early in the season and is thus more fire prone, also endangering the sage-grouse. ([Haak, conservation-portfolio-04172019.pdf page 7](#))
3. The main direct threat to sage-grouse from transmission lines is the tendency of sage-grouse to avoid tall, and especially tall linear, structures -- they recognize these are potential locations of predators. ( <https://pubs.usgs.gov/of/2014/1239/pdf/ofr2014-1239.pdf>, pg 8-9) The application, and the DPO, do not adequately account for the likely avoidance effects.
4. In its annual monitoring report in 2018, the ODFW concluded that sage-grouse populations throughout Oregon continue to decline

[https://www.dfw.state.or.us/wildlife/sagegrouse/docs/ODFW\\_2018\\_Sage-Grouse\\_Population\\_Report.pdf](https://www.dfw.state.or.us/wildlife/sagegrouse/docs/ODFW_2018_Sage-Grouse_Population_Report.pdf) at p. 1, hereinafter "ODFW 2018"). The state agency estimated that the 2018 spring population in Oregon was 18,421 individuals. This was a 10% decline from 2017 (population estimated at 20,510 birds), following a 7.7% decline from 2016. The 2018 population had now dropped to 37% below the 2003 baseline population estimate of 29,237 individuals (ODFW 2018). We expect ODFW to announce ever more severe declines in its 2019 report later this year. Other states have reported similar declines.[1] The Baker PAC, which will be affected by the B2H transmission line, has seen its population drop by 75.4% between 2003 and 2018, with a 10.9% decline from 2017 to 2018 alone. (ODFW 2018 at 32, 5).

The Draft Proposed Order and the application do not adequately address the enhanced danger that the B2H transmission line poses in light of the rapidly-decreasing populations. Neither the application nor the DPO actually cite the number of birds that will be affected, nor do they indicate that the sage-grouse populations in Oregon generally, and the Baker and Cow Valley PACs that will be affected by the B2H transmission line, are in serious and significant decline -- and that the addition of a significant habitat disruptor such as a linear transmission line could mark the death knell for these populations. Approval of a site certificate without considering the actual numbers of birds affected and the plummeting populations would be unlawful.

[1] See, e.g., IdahoNews, Idaho male sage-grouse counts decline 25% in one year, available at <https://idahonews.com/news/local/idaho-male-sage-grouse-counts-decline-25-in-one-year> (last visited Aug. 1, 2019) (Idaho Fish & Game reporting 25% decline in male sage-grouse since 2018); Angus M. Thuermer Jr., WyoFile, Greater sage grouse counts show 3-year downward trend, available at <https://www.wyofile.com/greater-sage-grouse-counts-show-3-year-downward-trend/> (last visited Aug. 6, 2019); Wyo. Game & Fish Dep't, Sage grouse counts likely to decline in coming year, available at <https://wgfd.wyo.gov/News/Sage-grouse-chick-production-likely-to-decline-in> (last visited Aug. 6, 2019) (Wyoming Game & Fish Department expected decline in 2018 based on an analysis of sage grouse wings provided by hunters); Nevada Department of Wildlife, Nevada Sage-grouse Lek Counts: Effort and Trends (2017), available at [http://sagebrushhco.nv.gov/uploadedFiles/sagebrushhconvgov/content/Meetings/2017/2017\\_GS\\_G\\_Lek\\_Counts.pdf](http://sagebrushhco.nv.gov/uploadedFiles/sagebrushhconvgov/content/Meetings/2017/2017_GS_G_Lek_Counts.pdf) (last visited Aug. 6, 2019) (reporting 10% decline in male lek attendance between 2016 and 2017).



## 8. Historic Cultural Pioneer Resources

The following comments are limited to the National Historical Oregon Trail. Archaeological resources are addressed by private landowners and Tribes. Stop B2H is not qualified to address those resource impacts.

**OAR 345-022-0090 on Historic, Cultural and Archaeological Resources, states:**

*(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to:*

*(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;*

*(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in 358.905(1)(c); and*

*(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).*

### 1. Oregon Trail

The scenic, historical, and cultural values of the Oregon Trail would be severely compromised by this transmission line. The transmission line will threatened the some of the last remaining intact segments of trail on the Mill Creek route in Union County, according to the Oregon California Trail Association. The Trail is crossed eight times by the proposed power line.

Four property owners in Union County have been accepted by Oregon State Historic Preservation Office (SHPO) to list their properties on the National Register of Historic Places along the La Grande to Hilgard segment. These properties offer unique glimpses into our past with swales and grave sites and one property on its initial assessment appears to have been a campsite. The disgrace is that Idaho Power wants to put a tower adjacent to it.

The transmission line will also violate the scenic values of the Blue Mountain Crossing Interpretive Center as transmission towers to the south will be able to be seen from it. The Travel Oregon web site describes the site this way, “A paved, easily accessible trail follows some of the best preserved and most scenic traces of the Oregon Trail. Interpretive panels depict the pioneers

struggle through the tall trees and over the rugged Blues.” The view of towers from this site needs to be mitigated, the route relocated, or line terminated.

At the National Historic Oregon Trail Interpretive Center (NHOTIC) in Baker County, Idaho Power did not do any noise studies, in violation of the noise standard under Recreation OAR 345-022-0100 and ODEQ OAR 340-035-0100, so the snap crackle and pop and the sight of ugly transmission towers, in violation of the scenic view standard, will be the impression that visitors will now come away with. Idaho Power should be embarrassed for desecrating a piece of American history this way. The visitors’ view, the sounds they hear, and the ground they walk on will be forever changed and not for the better. This is why so many are insisting that a class 3 estimate be done regarding undergrounding the transmission at the Interpretative Center location.

A class 1 swale located within the Area of Critical Environmental Concern (ACEC) at 44° 48’ 48.26”N 117° 75’ 57.97”W is to have a new road located very close to it. What else can Idaho Power do to permanently degrade this site? Oregon’s state shield contains an image of a covered wagon, representing the struggle and pride of the pioneers who settled the Oregon territory. One cannot put a cost on preserving the value of Oregon’s (and many Americans’) cultural heritage.

By reference, a member’s [Comment 3](#).

## **2. Undergrounding**

Idaho Power’s Exhibit BB on undergrounding is incomplete, inaccurate and misleading. A class 3 study need to be conducted using specifications to meet Baker County’s need to protect the viewshed of the National Historic Oregon Trail Interpretive Center and agricultural operations by placing the overhead transition stations on BLM land.

Starting at section 3.4 Options for Undergrounding the Transmission Line (pdf p 10) and continuing throughout the section the distance of the actual stretch proposed for burial is misrepresented and by extension the costs. Only a 2 to 2 ½ mile section is being proposed for study. This section discusses the costs related to a transmission line for long length installations (Section 3.4.1 pdf p 10). This comparison is inaccurate and misleading. In section 3.4.2 it again talks of unproven technology over long distances for 500 kV lines.

In section BB-3 in the discussion of the five basic technologies to consider for 500-kV AC underground circuits needs clarification. The Solid Dielectric Cable discussion is a perfect example of this confusion. It states that it is considered only for distances of up to a few miles at

the 500-kV voltage level. However, the last sentence states, “While the technology is progressively emerging, lack of practical experience results in major reliability concerns for operating larger scale 500-kV underground systems.” This is not a large scale 500 kV underground system and one has to ask why the confusion on distance?

The High Pressure Fluid-Filled Cable also talks of pumping plants being required every 7 to 10 miles. This is not the analysis being asked for. The link to the footnote at the bottom of the page is broken so cannot review the technical study mentioned. The Self-Contained Fluid Filled Cable section also references the same distribution of pumping plants that would be required as in the HPFF system.

The Design of Cable Systems section states that the “Concrete encased duct banks would be installed at a minimum cover depth of 3 feet, or as required by routing design, and would be backfilled with specially engineered thermally favorable backfill to assist in heat dissipation.” This would allow the line to be buried at a depth that would allow agricultural operations to occur above the buried line. This is a concern that the Baker County Commissioners have but Idaho Power has told them that the top of the concrete bunkers would be above ground level thus disallowing agricultural operations and this just is not true.

The section continues, “Depending on the terrain characteristics, burial depths may need to be increased to avoid heating the soil and changing the conditions of the vegetation and wildlife habitat above the duct bank or pipe type cables.” Since the depth can be adjusted to compensate for heat it can be adjusted for agricultural operations.

The underground to overhead transition stations mentioned can be placed on BLM land out of view of the interpretive center and avoid impacts to agricultural lands.

The last 2 bullet points in this section again talk of pumping plants every 7-10 miles for HPFF and SCFF options and reactive compensation would be required every 7 to 20 miles along the route depending on the cable technology.

We are not talking about burying the line for distances anywhere as long as this analysis contemplates. Therefore this analysis is incorrect and must be re-done. IPC and Baker County need to come together, develop specifications that satisfy Baker County’s desire to protect agriculture lands and their viewshed to calculate a class 3 estimate of the cost to underground the line in front of the precious Oregon Trail Interpretive Center. To not “cost-out” this option is blasphemy.

In the Reliability and Maintenance section IPC again confused the reader as it states, “In conjunction with their limited use, all installations to date have been relatively short compared to the Project, raising concern about the reliability of an extensive cross-country cable system. This is not an extensive cross-country cable system but the applicant wishes us to think this way with their consistent reference to long-distance system cost.



**IPC must work with Baker County to develop specifications to bury this line on private land and put the overhead transition stations on BLM land.** The BLM gave Baker County one million dollars in the 90's to protect the viewshed from the interpretive center. Idaho Power can pass the cost on to its ratepayers to protect this investment from the American people. **Idaho Power is desecrating an American piece of historical pioneer heritage.** It must not be allowed!

By reference we are incorporating the comments below to support this position:

[Comment 1](#)

[Comment 2](#)

**Idaho Power cannot comply with OAR 345-022-0090(1)(a); their application should be denied.**

**EFSC cannot allow Oregon's historical pioneer heritage to be desecrated by trampling swales, tearing up wagon-wheel ruts, and marring the views that hold the dreams and spirits of our pioneer ancestors.**

## 9. Wildfire and Public Safety

**Idaho Power cannot protect the citizens of Eastern Oregon from the risk of a catastrophic fire; but they could avoid adding to the risks by not constructing the line and investing instead in the current infrastructures.**

**Idaho Power could choose access routes that would adversely put the public's safety at risk.**

While nature plays the big role in fire, we know that the risk gets greater and greater as we get hotter and drier. Why would we allow an additional risk?

The California Fires have states and utilities rethinking how they manage a transmission system that has not been well maintained. What is curious is we have not seen any updated information about how the applicant and its partners intend to learn from the California disaster to better protect eastern Oregon from fires created from transmission lines. This included those older lines currently in operation (where investments should be made), as well as, new proposed lines, like the B2H.

Many members of our coalition members have written to ODOE about the California fires and by reference at the conclusion of this section we reference them for inclusion in the section.



Paradise, California 2018

The governor's office and OPUC have been developing policies to protect Oregonians from transmission line fires and we expect that ODOE will require the applicant and partners to submit more robust plans on the methods they will use to prevent fire from occurring due to their activities.

The Governor created the Wildfire Response Council in January 2019 and the OPUC shortly afterwards had a Wildfire Mitigation workshop<sup>16</sup>. In this workshop the chair of the Governor's Council on Wildfire Response, Matt Donegan, gave an overview of the councils charge<sup>17</sup>. In this overview a potential Utility Wildfire Mitigation Plan covering the below was discussed.

#### GOVERNOR'S WILDFIRE RESPONSE COUNCIL



## WILDFIRE MITIGATION PLAN

<b>Summary</b>	<ul style="list-style-type: none"> <li>• State requires plans of all electric utilities</li> <li>• PUC reviews and approves investor-owned utilities</li> </ul>
<b>Purpose</b>	<ul style="list-style-type: none"> <li>• Ensure adequate, consistent systems and plans across Oregon</li> </ul>
<b>Precedents</b>	<ul style="list-style-type: none"> <li>• California, Nevada, Other</li> </ul>
<b>Key Elements</b>	<ul style="list-style-type: none"> <li>• Broad-based plan encompassing public-private partnership</li> <li>• Mitigation of community impacts</li> <li>• Reduction of fire risk (e.g., hazardous fuel reduction, power shutdowns)</li> <li>• Financial plan</li> <li>• Regulatory authorities</li> <li>• Frequency of updates, maintenance</li> </ul>

After this presentation an ODF Wildfire Risk Mapping Tool was presented to the commission<sup>18</sup>. This is a useful tool for enabling communities and utilities to conduct Wildfire Risk Assessments, asses High Value Infrastructure, compare Wildfire Risk vs Wildfire Danger, and present an Oregon Wildfire Risk Explorer Demo. Then PGE and Pacific Power gave Presentations of their Wildfire Mitigation Plans.

The applicant is not in full compliance with OAR 345-021-0010(1)(u). The Council MUST insist that Idaho Power and partners develop a detailed Wildfire Mitigation Plan and present to EFSC before a site certificate is issued. We cannot wait for the applicant to develop a plan after the site certificate, as this is too important! Risks to the economies, livelihoods, environment, way of life and LIFE is at stake!

<sup>16</sup> [http://oregonpuc.granicus.com/GeneratedAgendaViewer.php?view\\_id=1&event\\_id=366](http://oregonpuc.granicus.com/GeneratedAgendaViewer.php?view_id=1&event_id=366)

<sup>17</sup> [https://oregonpuc.granicus.com/MetaViewer.php?view\\_id=1&event\\_id=366&meta\\_id=21149](https://oregonpuc.granicus.com/MetaViewer.php?view_id=1&event_id=366&meta_id=21149)

<sup>18</sup> [https://oregonpuc.granicus.com/MetaViewer.php?view\\_id=1&event\\_id=366&meta\\_id=21151](https://oregonpuc.granicus.com/MetaViewer.php?view_id=1&event_id=366&meta_id=21151)



It seems the EFSC is too comfortable to issue a site certificate then let the applicant submit detailed plans that only the utility, ODOE, and connected state agencies review. This needs to be done in an open, transparent, and public process. These are our lives and property you are talking about--and we cannot trust an agency that receives the majority of its income from utilities/developers that it is trying to regulate. Sorry but true.

The development of this mitigation is especially important in the Morgan Lake area of Union County; but really everywhere in the five counties of Eastern Oregon! The households in the Morgan Lake area are not in any rural fire protection district. ODFW is the only agency that will respond to a call. However, they will only put out grassland and timber fires. They will not protect structures. In Union Counties 2005 Community Wildfire Protection Plan<sup>19</sup> it says this about the Morgan Lake area. None of the specific projects have been completed. So this area has no fire evacuation plan and no rural fire protection.

***A transmission line should not be built in this area as the risks are too high!***

---

<sup>19</sup> Plan <https://www.oregon.gov/ODF/Documents/Fire/CWPP/UnionCounty.pdf>

WUI Name: Morgan Lake / Looking Glass Hill

Priority Category: High

Risk Assessment Factors						
Wildfire Hazard, including: Fire Occurrence, Topography & Total Fuels	Overall Fire Protection & Structural Vulnerability	Values At-Risk	Weather Hazard	Opportunity for Fuels Reduction	Score	Rank
60	37	22.5	10	5	134.5	1

**Communities at Risk:** Morgan Lake, City of La Grande

**Structural Fire Protection Agency:** La Grande Fire Department protects to the City Limit; otherwise it is wildland fire protection only.

**Projects:** Many projects identified in this plan apply to all wildland-urban interface areas because they are broader in scope or represent general outreach messages or educational opportunities. Those listed here are specific to individual interface areas in Union County.

WUI – Specific Projects	Timeframe	Lead Agency/Cooperators
Morgan Lake Private Lands	• 1-2 years	• ODF; Landowners, LGFD; LGRFPD
Prepare Morgan Lake Evacuation Plan	• 1-2 years	• UCES; UCPW; UCSO
Reconstruct Morgan Lake Road	• 3 + years	• UCPW; ODOT
Establish RFPD for Morgan Lake	• 3 + years	• Landowners; UC; Structural Agencies

The governor’s Wildfire Response Council and OPUC are working to develop plans to protect people and property from transmission lines and the county has identified the Morgan Lake area as its highest risk area. Why then do we only have this skimpy Fire and Suppression plan in Attachment U? Have we learned nothing from California?

A robust analysis needs to be done for each county using the ODF Wildfire Risk Mapping Tool in coordination with county emergency managers and fire chiefs of all districts and jurisdictions.

A review of ATTACHMENT U-3 FIRE PREVENTION AND SUPPRESSION PLAN in the DPO brings up many shortfalls. We detail them below; however it should be stated: overall, this plan as written is inadequate and unacceptable!

**In 1.0 Introduction** it states, “This preliminary Fire Prevention and Suppression Plan (Plan) describes the framework for measures to be taken by IPC and its contractors (Contractor) to ensure fire prevention and suppression measures are carried out in accordance with federal, state, and local regulations.” However at 1.3 it states, “Restrict operations on federal lands during conditions of high fire danger as described in Section 2.2, Restricted Operations.”

*What happened to the state and county fire regulations? Or is the applicant asking for an exception to state and county fire ordinances? Please include all agencies responsible for fire preventions and suppression.*

The majority of this work will be done in high fire season so the comment in 3.1 that, “Fire risk is anticipated to be low during Project operations, and therefore the fire prevention and suppression measures described in this Plan will be in effect from pre-construction to the end of restoration.”

*This statement continues to show the applicant’s unfamiliarity with the fire dangers in eastern Oregon and starts us to thinking that they should contract out this work to regionally licensed professionals. We do appreciate IPC and the contractor staying on site until the restoration of the project. As outlined in Exhibit W Retirement, 3.1 Estimated Useful Life, the company states that it will exist into perpetuity and we in Eastern Oregon will appreciate the additional fire coverage.*

**At 2.1.1 Training** it states that the contractor and IPC will do the training.

*A condition needs to be inserted that they will hire a licensed wildland fire training provider to train all employees before they can work anywhere on the project site.*

### **2.1.5 Equipment**

We support Union County’s position that Type 6 or 4 engine and crew from a qualified wildlands firefighting contractor be on site all the time until the end of restoration.

### **2.1.6 Road Closures**

The Contractor and IPC will notify the appropriate fire-suppression agency of the scheduled closures prior to the open-cut crossing of a road.

*The appropriate fire-suppression agencies as well as the public works directors of the municipalities and the neighborhoods need to be notified at least 48 hours prior to scheduled closure. In addition the local print, radio, and social media outlets need to be notified of these closures 48 hours in advance.*

### **2.1.10 Communications**

It is our understanding that private companies do not have access to two way communications on governmental frequencies. And if they did all communication systems are challenged to give coverage in eastern Oregon.

*Therefore satellite phones need to be on site and with all the responsible company representatives at the various operational sites for fire control.*



## 2.2 Restricted Operations

We find the first sentence unacceptable. It states that the company will only answer to land management agencies. “The Contractor and IPC will restrict or cease operations in specified locations during periods of high fire danger at the direction of the land-management agency’s closure order.”

*In Eastern Oregon, off of federal lands, the counties regulate fire restrictions outside of cities and cities regulate them inside their boundaries. This section needs to be changed to include all governmental agencies that have the authority to regulate land use to control for fire protection.*

Idaho Power talks about obtaining approval, to continue some or all operations, if acceptable precautions are implemented. This needs to be clarified.

*This needs to state that these approvals WILL be obtained from all agencies responsible for the area they are asking for the exception.*

## 3.2 Maintenance

*This first sentence needs to include satellite phones for notification purposes as discussed above.*

During maintenance operations, IPC or its Contractor will equip personnel with basic fire-fighting equipment, including fire extinguishers and shovels as described in Section 2.1.5, Equipment. Maintenance crews will also carry emergency response/fire control phone numbers.

During BLM's Stage II Fire Restrictions, obtain an appropriate waiver and take appropriate precautions when conducting routine maintenance activities that involve an internal combustion engine, involve generating a flame, involve driving over or parking on dry grass, involve the possibility of dropping a line to the ground, or involve explosives. Precautions include a Fire Prevention Watch

*This bullet point needs to cover obeying other agencies’ fire restrictions. Why does it seem that only BLM or “federal agencies” matter?*

Coalition Member letters on wildfires included by reference.

Fuji Kreider -- <https://drive.google.com/open?id=1e-10FrmMmAMUMiC6CE558VxQnj4nAF5V>

Gail Carbiener -- <https://drive.google.com/open?id=1ajCIIQati6HwPw6mVeaF-ISMcKvSPYl>

## **Attachment 9.1**

### ***Public Safety***

In the matters of Public Safety, in and around La Grande and Union County, we include by reference the concerns of the Modelaire/Hawthorne neighborhood, under the submission of Virginia Mammen, as [Attachment 9.1](#).

## 10. Conclusion

With limited time and resources our Stop B2H Coalition, concerned with protecting our environment, heritage and lifestyle from massive disruption by an Idaho Corporation, have done our best to inform and involve our neighbors while reading, researching and writing responses to the ASC and DPO. EFSC's requirement to cite relevant rules, standards and regulations as essential to validating Comments is daunting to the average citizen and discourages public participation. And we wonder is this by design?

The ASC and DPO were unnecessarily cumbersome, finding many attachments or exhibits referenced in the DPO or in cross referenced documents was painful and the presentation of the documentation had layer upon layer of information on top of each other that was often repetitive and distracting. This process needs to be revamped as public participation is impeded and only those with large amounts of money to hire experts can participate. Or dedicated group of retired people with the skills to organize their communities, which are an exception and not the norm. ODOE needs an advocate's office to help people participate in the process that is funded in the same manner that SAG's can ask for consultants fees to help them prepare comments.

It's evident that much of this "public comment" opportunity is window dressing appearing to fulfill the letter of the law, but certainly not the spirit of active public participation. Applicant's initial efforts to overwhelm rural county planning offices with a deadline of 30 days to respond to 240 lbs. of documentation (lacking both indices and pagination) should say it all.

Conclusions based on inadequate monitoring, invalid assumptions, omissions and misrepresentations are not acceptable. This practice is so frequent that it seems applicant has reason to believe only a perfunctory effort is necessary because EFSC route approval is assured. The Council must make Idaho Power prove their assertions and support their conclusions. As a part of evaluating route applications, ODOE has a responsibility to the citizens of Oregon to protect the environment and public safety.

*In the documentation and in the process we have identified:*

- *noise monitoring without appropriately located sensors*
- *archeological analysis without on-the-ground surveys*
- *an overabundance of the statement "no significant impact" by Idaho Power when in fact there is significant impacts where they saw none*
- *incomplete geological analysis neglecting to call out the cumulative impacts of known slide and fault areas on route integrity*
- *pushing all mitigation plans out until after a site certificate is issued so these plans can be developed away from public oversight*
- *meaningless maps without landmarks or streets labeled*
- *denial by Idaho Power of GIS maps, that were in existence, for overlay on google earth to help in informing landowners about landslide, fault, earthquake, and blasting impacts to their land*
- *inadequate notice to individuals whose properties will be affected*
- *excessive reliance on small public service agencies to fight fire*
- *failure to evaluate impacts on protected areas*



Numerous Oregon regulations cited in the ASC contain this phrase: *to issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact.* The “significant adverse impacts” of the B2H as we have outlined them would be massive, destructive, and potentially dangerous.

We believe we have made the case that this analysis is incomplete and not in the best interest of Oregonians and urge the Council to deny this application for a site certificate.



Respectfully Submitted on behalf of the Stop B2H Coalition,

**Jim Kreider, Co-Chairperson**  
60366 Marvin Road  
La Grande, Oregon 97850



*Protect Our Land; Preserve Our Heritage*

Connie Struck  
91 2nd St  
LA Grande, OR 97850

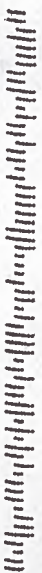
**RECEIVED**  
AUG 21 2019  
Department of Energy

Oregon Energy Facility Siting Council  
% Helen Janssenweller, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.,  
Salem, Oregon 97301

FORWARDED ON 8/21/19  
19 AUG 2019 PM 4 L



97301-374299



Oregon Energy Facility Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E  
Salem, OR 97301

Email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project (B2H) 9/28/2018; Draft Proposed Order 5/23/2019.

Dear Chair Beyeler and Members of the Council:

This letter is a public comment for the above referenced project. Specifically, this letter will discuss Idaho Power's compliance with Standard 345-022-0110 - Public Services, in Exhibit U (3.5.6.2 and 3.5.6.5) of the EFSC application for B2H to ODOE. The letter will discuss the impact potential wildfires caused by the B2H transmission line will have on the ability of public and private providers within the analysis area to provide fire protection.

The effect of transmission lines on wildfire impact in western states has been well documented. In California, PG&E lines have caused 5 of the 10 most destructive fires since 2015, producing a liability of over 30 billion for PG&E. When considering the impact of B2H's operation, residents of Union County find the similarities between La Grande and Paradise California, where the infamous Camp Fire struck in 2018, deeply concerning. La Grande and Paradise share similar elevations and populations, however, La Grande has several characteristics that make it significantly more vulnerable to the ravages of wildfire than Paradise. For instance, La Grande averages 18 inches of rain yearly while Paradise enjoys 55 inches. Additionally, the proposed line runs adjacent to La Grande, while the line causing the Camp Fire was 7 miles from Paradise. *Oregon's 2006 Communities at Risk Assessment* by the Oregon Department of Forestry cites a startling fact: **The fire risk of the wildland urban interface (WUI) in La Grande has been rated the #1 WUI fire risk in Oregon!**

There is no doubt that construction of the proposed B2H transmission line would significantly increase the risk of wildfire in our area. From Idaho Power's own Draft Protection Order (Exhibit U-3.5.6.2, p. U-24): "Most activities will occur during summer when the weather is hot and dry. Much of the proposed construction will occur in grassland and shrub-dominated landscapes where the potential for naturally occurring fire is high. Project construction-related activities, including the use of vehicles, chainsaws, and other motorized equipment, will likely increase this potential risk in some areas within the Site Boundary. Fire hazards can also be related to workers smoking, refueling, and operating vehicles and other equipment off roadways. Welding on broken construction equipment could also potentially result in the combustion of native materials near the welding site." Idaho Power recognizes this hazard but makes no consideration of it in its application.

There are several specifics to examine in an analysis of the proposed B2H line's effects on Union County's ability to provide fire protection services. Firstly, firefighting crews in our region are



limited and volunteer. In their application, Idaho Power avers, "Most of the fire districts within the analysis area comprise volunteers, and in some cases, it takes considerable time to collect and mobilize an entire fire crew." As well, JB Brock, Union County emergency Manager states in Idaho Power's application "volunteer fire departments (rural fire protection districts) have a hard time finding volunteers due to budget constraints, similarly to budget constraints at the state and federal level. The wildland fires are getting bigger and cost more to fight" (U-1C-6). Fire crews in Union County are not equipped to handle potential wildfires generated by the proposed B2H transmission line.

The fact that fire crews are unstable, small and volunteer affects many aspects of their ability to respond to wildfires. Delayed response times, as noted in the quote from the previous paragraph, is one effect. Estimates of response time in the EFSC application are best-case scenarios. The estimate of 4 to 8 minutes as the response time in Union County (Table U-10) is far from even a best-case scenario (p. U-17). Residents that live on Morgan Lake Road concur that driving time is at least 10-15 minutes to the most accessible areas of the line from the base of Morgan Lake Road. Add to this estimate travel time from the La Grande Fire Station (approximately 7 minutes) and the time needed for individual fire fighters to travel to the Fire Station for a more realistic best-case scenario response time. The Paradise Camp Fire burned at a rate of over 1 acre per second!

Another factor in transmission line fires particularly impactful for small volunteer fire departments is the complications to firefighting introduced by the transmission lines themselves. According to Marvin Vetter, ODOF's Rangeland Coordinator, "local crews have no training in this scenario and will wait for the lines to be de-energized." JB Brock, Union County Emergency Manager, states, "The project (transmission line) could limit the ability on initial attack if fire fighters have to wait for power lines to be de-energized." (U-1C-6) These delays allow fires to grow even more.

How can communities struggling to maintain volunteer fire crews hope to address the overwhelming additional challenges and risks imposed by a project such as the B2H transmission line? Where is this addressed in Idaho Power's application and how can Idaho Power conclude that the proposed B2H transmission line is "not expected to have significant adverse impacts on fire protections services" (Exhibit U 3.5.6.2)? Considering the current capacities of fire protection services in Union County and the additional risks of wildfire imposed by the B2H transmission line, I urge you to act in accordance with state statute OAR 345-022-0110 and reject Idaho Power's application to construct the Boardman to Hemingway transmission line.

Sincerely,

Connie J. Struck  
91 2nd St.  
La Grande, OR 97850  
Name  
Address

## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:53 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.38.19.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter signed by me and 54 other residents of La Grande expressing our concerns regarding the B2H Project and we request that EFSC deny the Site Certificate.

I have also sent a bound copy of this material by the US Postal Service.

Sincerely,

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850

August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, OR. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the usage of the "Local Streets" <sup>1</sup> specifically the Modelaire-Hawthorne Loop) <sup>2</sup>, hereafter referred to as the "loop", of La Grande to access the site entrance. This residential "loop" was constructed without sidewalks for a new development around the early 1960s.

According to OAR 345-022-0110, Public Services (pg. 5. April 2017) "The applicant...must address all permanent and temporary impacts of the facility on housing, traffic, safety, police and fire protection, health care and schools." <sup>3</sup>

My impression from reviewing the application Page 17 <sup>4</sup> is that the applicant has not fully examined the final portion of the intended route nor does it fully recognize or address the need for traffic mitigation. This "loop" is the only access to/from thirty-six houses to the rest of the city. The area to the north of the "loop" is occupied by the Grande Ronde Hospital and Medical Clinic. Two blocks to the east is located the local high school and a grade school. <sup>2</sup>

In June of 2016, the Grande Ronde Hospital petitioned the City to have a conditional use for a parking lot expansion project next to Hawthorne. The Conditional Use Permit was approved subject to the Condition of Approval that "No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to residential standards and is not designed to support commercial traffic." <sup>5</sup>



The La Grande Director of Public Works, Kyle Carpenter, provided information regarding the widths for the streets in question. The two streets range from 33 feet to 37 feet in width with no sidewalks. I personally measured the area where the unpaved stem of Hawthorne leaves the "loop" to go up the hill. At the junction it measures 32 feet curb cut to curb cut and narrows to 18-21 feet in width as it goes around the corner up the hill. 6 The Public Works Director also provided pictures of the mapping system showing the existing utilities located in the "loop". 7-8. It should also be noted that from the entrance to the "loop" at Sunset Drive to the entrance of the site the road has a 16% grade.

Attachment U2 9 from the application shows an "Aerial Lift Crane to be Used During Construction" and the Transportation and Traffic Plan on page 19 10 lists a number of other vehicles anticipated to be used. Article 6.6 — Public Street Standards for the City of La Grande Section 6.6.002 states that "Collector Streets are designed to withstand normal trucks of an HS20 loading. Larger trucks are to utilize Arterial Streets where at all possible." 11 The majority of vehicles listed on page 19 exceed that limit and would be using a Local Street in addition to Arterial and Collector Streets. According to the Public Works Director the two streets in the "loop" were designed as Local Streets for residential use, able to accept the pressures of HS20 for the purpose of an occasional need such as a weekly garbage truck or an emergency vehicle but for no more than 5% of the time. The paving construction of these over 50 year old streets in the "loop" was not designed for repetitive use by vehicles heavier than a normal car. These streets in the "loop" have not been repaved, only patched when necessary, since they were first constructed.

The application does not address the "loop" specifically, but 3.1.2 (pg. 19) 10 and Table 6 (pg.17) 12 of the Transportation and Traffic Plan indicate there would be numerous vehicles using this route. Not knowing exactly just which vehicles would be on the "loop" daily but making a conservative estimate of 50 round trips (100 single) it would be a constant parade with one truck every 7.2 minutes. This is unacceptable for numerous reasons including constant excessive noise.

Not only would weight of the vehicles be a problem but the narrowness of the "loop" streets and the ninety degree blind curves that would have to be executed would be either impossible or extremely dangerous considering the turning radius for many of these large vehicles. The

already dangerous situation for a number of driveways that exit onto these "loop" streets at blind curves would be exacerbated. 13-14

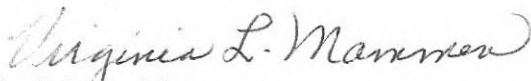
When considering only the traffic and safety issues listed above, the use of the "loop" as a part of the route for Idaho Power seems to be not only dangerous for the residents but unconscionable and irresponsible for Idaho Power to use such streets that are currently primarily for the neighborhood for walking (children to school, all ages for physical training), driving, or biking. I fear there are standards that are either not being considered or they are intentionally being ignored. There should be some common sense, courtesy and respect for the impact this project would impose on any neighborhood.

Finally, La Grande Ordinance Number 3077, which adopted Oregon State Traffic Laws by reference, states in Section 17 page 8 "It shall be unlawful for any person, firm or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes." Neither Modelaire/Hawthorne Loop nor Sunset Drive are posted as truck routes. 15-16

A site review and traffic plan must be completed prior to the cite certificate being issued and not 90 days prior to construction as stated.

For the above reasons I oppose the usage of the proposed route for the construction of the B2H transmission line.

Sincerely,

  
Virginia L. Mammen  
405 Balsa  
La Grande, Oregon. 97850

gmammen@eoni.com



**TABLE 1  
 STREET STANDARDS**

Functional Classification	ADT Volume	Speed (mph)	# of Travel Lanes	Travel Lane Width	Turn Lane or Median Width	Bike Lanes	Min. Bike Lane Width	On-Street parking
Downtown Arterial	10,000	20	2-3	11'	11'			both sides
Arterial	10,000	40-55	2-5	12'	4-14'	optional <sup>4</sup>	5'	none
Major Collector	2,000 - 10,000	25-45	2-3	11'	12'	required	5'	one or both sides
Minor Collector	1,000 - 2,000	25-35	2	11'	none	Optional <sup>5</sup>	5'	one or both sides
Local Street	0 - 1,000	15-25	2	10'	none	none	none	one or both sides

Functional Classification	Sidewalks	Min. Sidewalk Width	Planting Strip Width <sup>1</sup>	Total Paved Width <sup>2</sup>	Total ROW Width <sup>3</sup>	Private Access Spacing
Downtown Arterial	required	12'	3'6" <sup>6</sup>	49'	80'	200'
Arterial	required	5'	8'	36'-72'	80'-102'	200' - 400'
Major Collector	required	5'	8'	52'-60'	62'-90'	150' - 300'
Minor Collector	required	5'	8'	30'-48'	60'-78'	75' - 150'
Local Street	required	5'	8'	28'-36'	40'-66'	Each Lot

<sup>1</sup>A portion of the required planting strip width may be used instead as additional sidewalk width or reduced right of way, as appropriate.

<sup>2</sup>The minimum of the paved width was calculated with the following assumptions:

Arterials: Two (2) travel lanes, four foot (4') median divider, no center turn lane, no bike lanes.

Major Collectors: Two (2) travel lanes, two (2) bike lanes, no center turn lane, parking on one (1) side.

Minor Collectors: Two (2) travel lanes, parking on one (1) side of street, no bike lanes.

Local Streets: Two (2) travel lanes, parking on one (1) side of street.

The maximum paved width for each street was calculated assuming the inclusion of all required and optional facilities. Minimum paved widths for each street are as required in Section 6.2.005 of this Code.

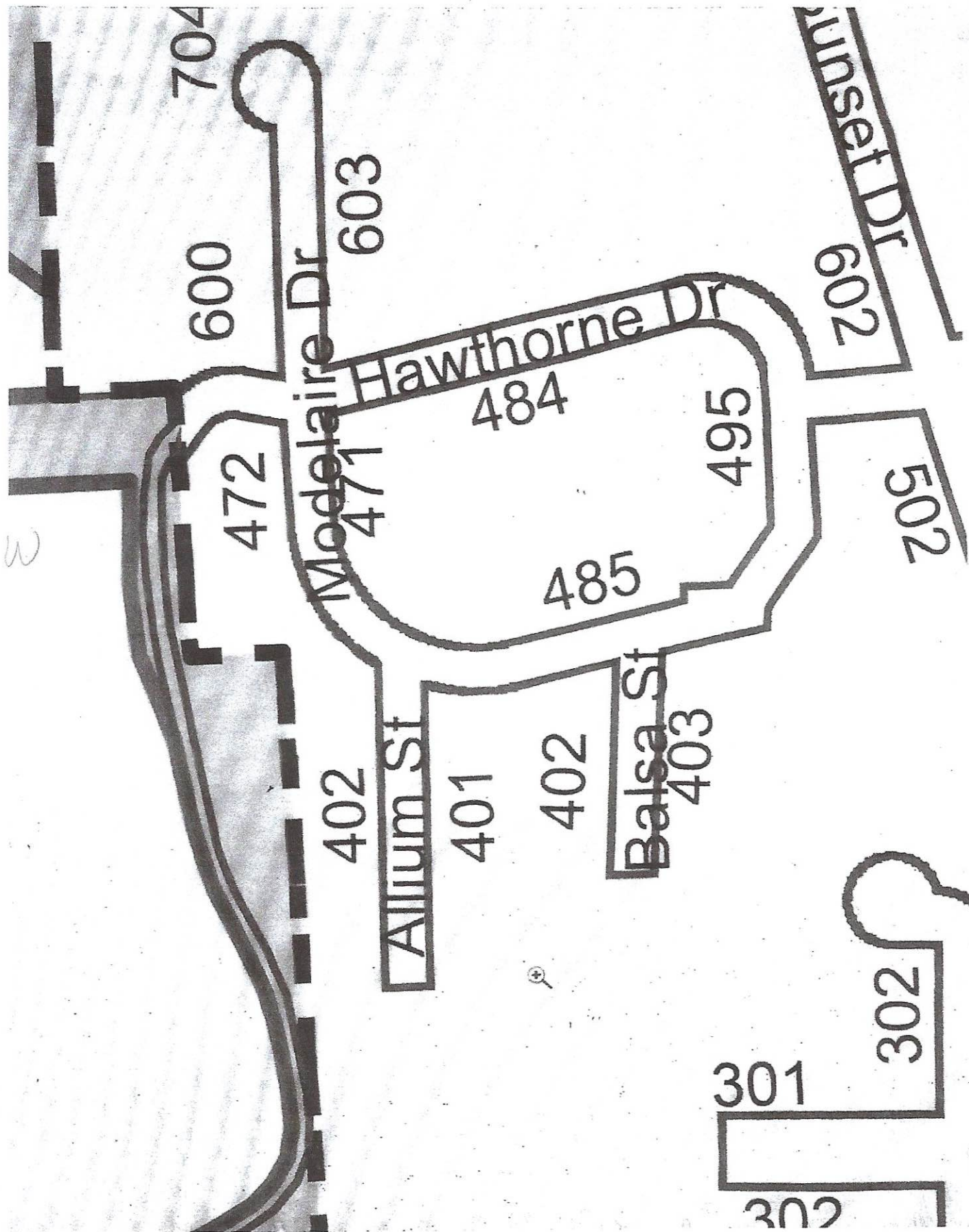
<sup>3</sup>These right-of-way width ranges are for new streets.

<sup>4</sup>Bike lanes should be provided on Arterials unless more desirable parallel facilities are designated and designed to accommodate bicycles.

<sup>5</sup> Bike lanes should be provided on Minor Collectors where traffic volumes or other factors warrant. Otherwise, Minor Collectors should be designed and designated as shared roadway facilities with wide outside travel lanes of 14' on important bike routes.



N



5



## Public Services

### OAR 345-022-0110

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## Waste Minimization

### OAR 345-022-0120

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## Need for a Facility

### OAR 345-023-0005

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## Specific Standards for Wind Facilities

### OAR 345-024-0010 and 345-024-0015

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## Specific Standards for Transmission Lines

### OAR 345-024-0090

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





Idaho Power Responses to Comments and Requests for Additional Information on the B2H APASC  
from the City of La Grande  
Compiled by ODOE. RAI's from the City of La Grande and Responses from IPC

U	U- Public Services include utilities such as road systems, water, sanitation services, power, and other amenities necessary for the construction.	Ordinance #2912, Series 1997 gives the City jurisdiction and control on all City street rights-of-way and Ordinance #3077, Series 2009, establishes the process and requirements for permits and licenses for uses of the streets that are not normal uses and may result in damages.	proposed helipad is a necessary supporting facility.	<p>To address the City's concerns regarding traffic and road use within the city's limits, Idaho Power has added the following proposed conditions to Exhibit K:</p> <p><i>Land Use Condition 9: Prior to construction in Union County, the site certificate holder shall complete the following to address traffic impacts in the county:</i></p> <p><i>a. The site certificate holder shall finalize, and submit to the department for its approval, a final county-specific transportation and traffic plan. The protective measures described in the draft Transportation and Traffic Plan in ASC Exhibit U, Attachment U-2, shall be included and implemented as part of the final county-specific plan, unless otherwise approved by the department;</i></p> <p><i>b. The site certificate holder shall work with the Union County Road Department and the City of La Grande Public Works Department to identify concerns related to Project construction traffic; and</i></p> <p><i>c. The site certificate holder shall develop traffic control measures to mitigate the effects of Project construction traffic.</i></p> <p><i>Land Use Condition 26: During construction in Union County, the site certificate holder shall conduct all work in compliance with the Union County-specific</i></p>
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#### IV. CONCLUSIONS

Based on the Findings of Fact above, the Planning Commission concludes that the application meets the requirements established in LDC Articles 8.5 and other applicable codes and Ordinances.

#### V. ORDER AND CONDITIONS OF APPROVAL

Based on the conclusions above, the Planning Commission approves the Conditional Use Permit as requested, subject to the following Conditions of Approval:

1. No driveway access to GRH parking lot areas shall be permitted onto Hawthorn Drive as such street is developed to a residential standards and is not designed to support commercial traffic.
2. Any existing driveway curb cuts along Hawthorn Drive bordering GRH's property, that are not used for residential purposes, shall be removed and replaced with City standard improvements that exists adjacent to such areas.
3. There is a storm sewer line extending through the project area that shall to be protected. Any improvements that may affect the storm sewer line shall be reviewed and approved by the Public Works Director.

#### VI. STANDARD CONDITIONS OF APPROVAL FOR LAND USE APPLICATIONS

1. **Revisions to a Valid Conditional Use Permit:** Any variations, alterations, or changes in a valid Conditional Use Permit requested by the deed holder shall be considered in accordance with the procedures of the Land Development Code as though a new Conditional Use Permit were being applied for.
2. **Public Works Standards:** Where a development involves work within the public right-of-way, a Right-of-Way Permit shall be obtained from the Public Works Department in advance of commencing with any work in the right-of-way. All improvements within the public right-of-way shall be in conformance with the most recent adopted City of La Grande "Engineering Standard Drawings and Specifications for Construction Manual."
3. **Building Permits:** The City of La Grande Building Department shall be contacted early in the process and in advance of development to coordinate and obtain required building, plumbing, electrical and/or mechanical permits. All required permits shall be acquired in advance of construction.

#### VI. OTHER PERMITS AND RESTRICTIONS

The applicant and property owner is herein advised that the use of the property involved in this application may require additional permits from the City of La Grande or other local, State or Federal Agencies.

The City of La Grande land use review, approval process and any decision issued does not take the place of, or relieve the applicant of responsibility for acquiring such other permits, or satisfy any restrictions or conditions thereon. The land use decision herein does not remove, alter, or impair in any way the covenants or restrictions imposed on this property by deed or other instrument.

The land use approvals granted by this decision shall be effective only when the rights granted herein have been exercised and commenced within one (1) year of the effective date of the decision. In case such right has not been exercised and commenced or an extension obtained, the approvals granted by this decision shall become null and void. A written request for an extension of time shall be filed with the Planning Department at least thirty (30) days prior to the expiration date of the approval.



Virginia Mammen &lt;4gmammen@gmail.com&gt;

**Modelaire Roadway Specifications**

3 messages

Kyle Carpenter <KCarpenter@cityoflagrande.org>  
To: "gmammen@eoni.com" <gmammen@eoni.com>

Fri, Jul 12, 2019 at 1:51 PM

I have attached a couple pictures of our mapping system that will give you a sense of where existing utilities are in Modelaire and Hawthorne. As for the widths of the roadways, I took measurements in multiple places, and found the following:

- Modelaire Drive (F Avenue) between Sunset Blvd and Hawthorne Drive is approximately 33 feet wide with a grade of about 5 Percent.
- Hawthorne Drive is approximately 32 feet wide at the bottom near the intersection of Modelaire/F Avenue and widens to about 34 feet where it intersects Modelaire at the top of the hill. The grade heading up hill is approximately 15.5 Percent.
- Modelaire Drive is generally 36 feet wide with some minor variability generally less than a foot (35' to 37'). On the southernmost segment of the roadway where the majority of the elevation gain is observed the grade is approximately 16 Percent.

Let me know if there are any other specifications of these roadways that you are interested in that I have missed. Have a great weekend and thanks for the treats, the guys were very appreciative.

*Kyle Carpenter, PE*

**Public Works Director**

**City of La Grande**

**Public Works**

Ph: (541) 962-1325

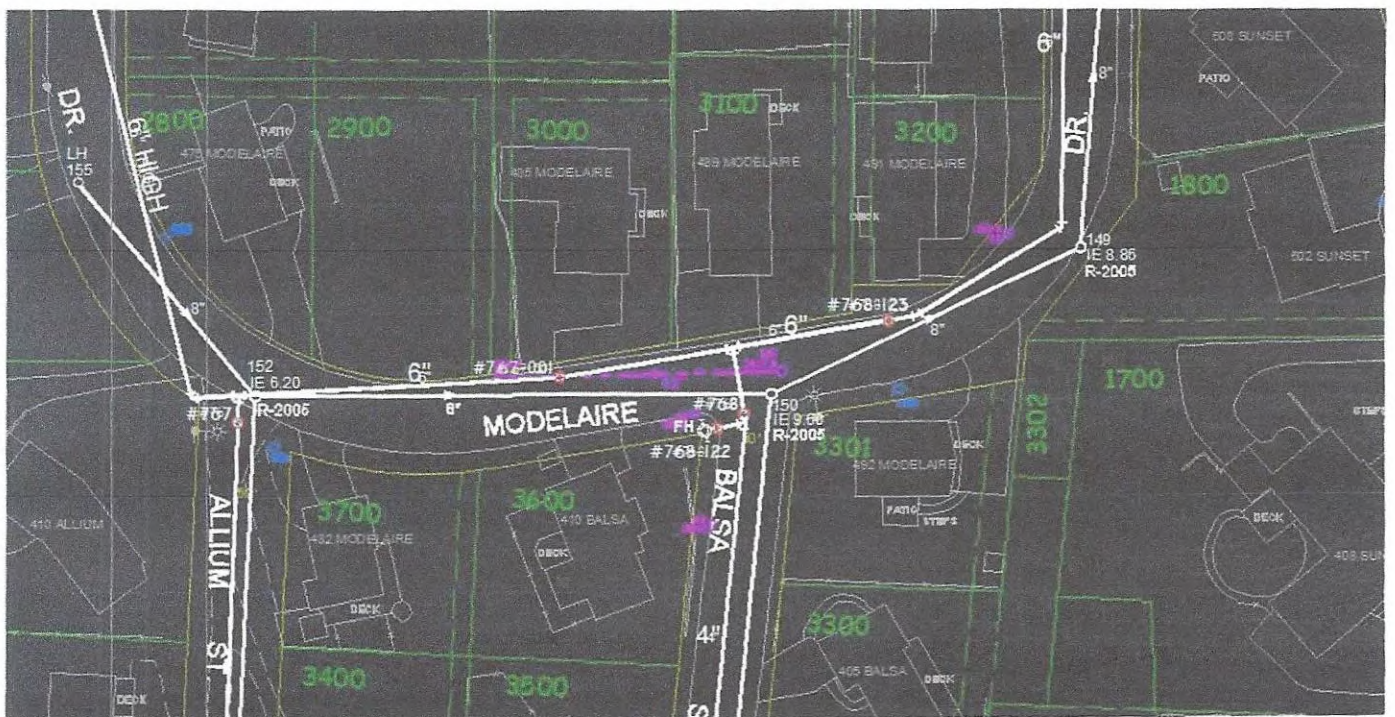
Fax: (541) 963-4844

**2 attachments**

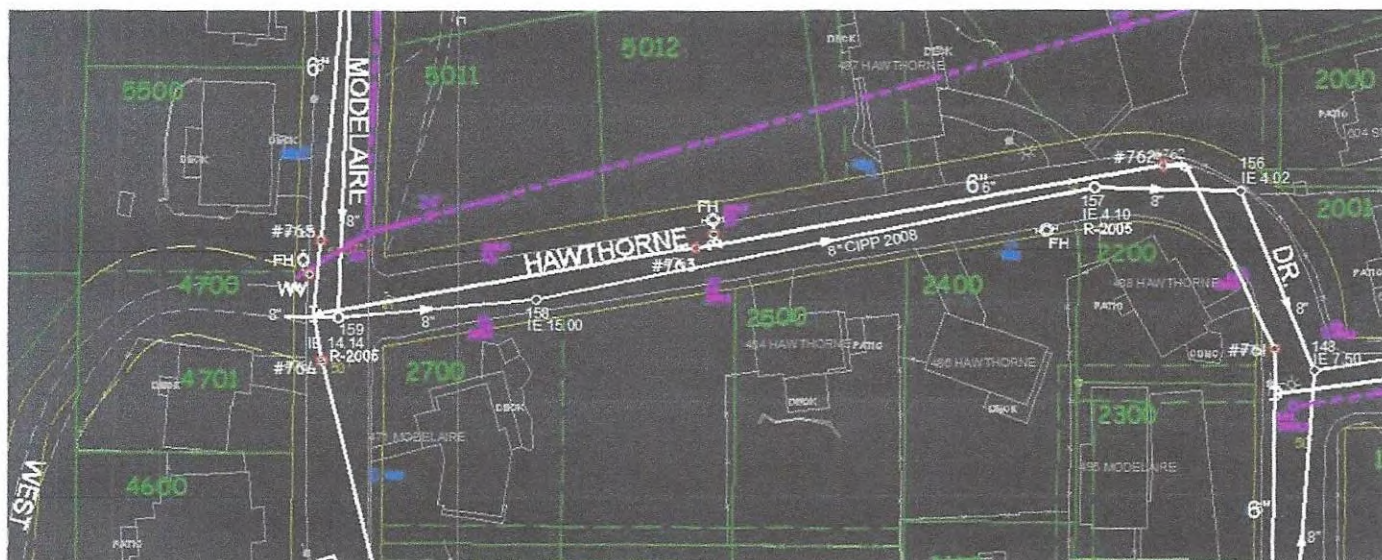
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150K

**Modelaire.jpg**  
120K









attachment U2

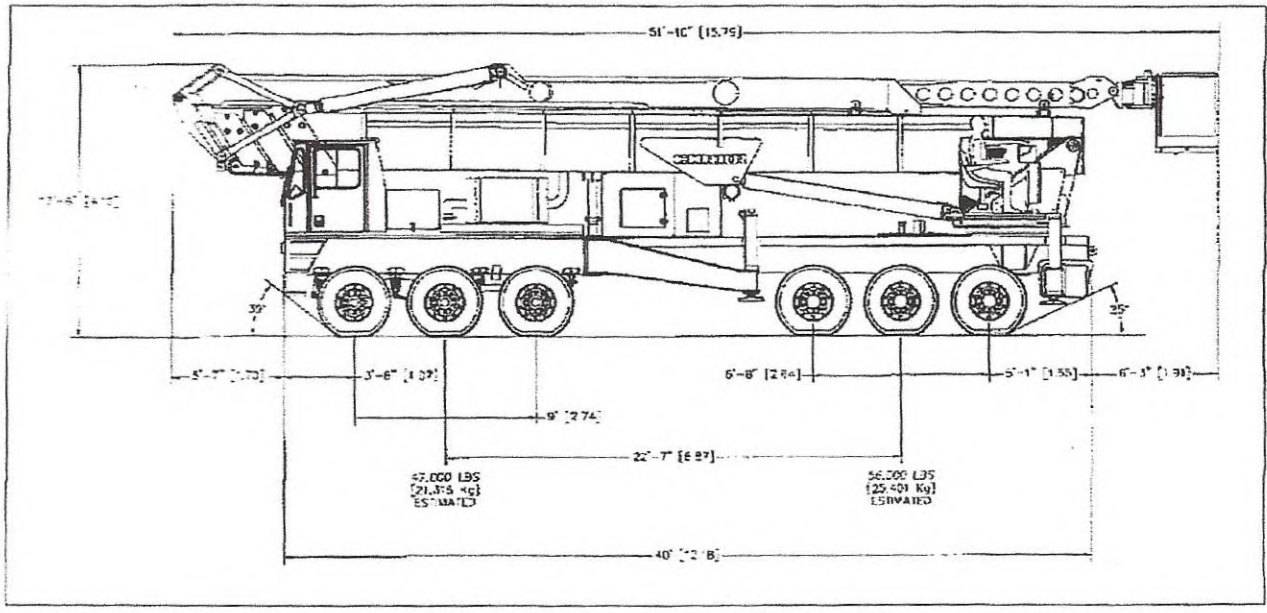


Figure 2. Example Aerial Lift Crane to be Used During Construction (Roadable Length 52 Feet; Width 8 Feet 6 Inches)



The following is a summary of anticipated equipment to be used for each transmission-line construction activity.

- Survey work: pickup trucks or ATVs.
- Timber removal: pickup trucks, feller bunchers, dump trucks, wood chippers.
- Road construction: pickup trucks, bulldozers, motor graders, and water trucks.
- Hole digging, installation of directly embedded structures, or foundation installation: pickup trucks, 2-ton trucks, digger derrick trucks, hole diggers, bulldozers, concrete trucks, water trucks, cranes, hydro cranes, wagon rock drills, dump trucks, and front-end loaders.
- Hauling lattice steel members, tubular poles, braces, and hardware to the structure sites: steel haul trucks, carry alls, cranes, and forklifts.
- Assembly and erection of structures: pickup trucks, 2-ton trucks, carry alls, cranes, and a heavy lift helicopter.
- Wire installation: pickups, wire reel trailers, diesel tractors, cranes, 5-ton boom trucks, splicing trucks, three drum pullers, single drum pullers, tensioner, sagging dozers, carry-alls, static wire reel trailers, bucket trucks, and a light duty helicopter.
- Final cleanup, reclamation, and restoration: pickup trucks, 2-ton trucks, bulldozers, motor graders, dump trucks, front-end loaders, hydro-seed truck, and water trucks.

The highest level of traffic will be when the wire stringing operations begin while several other operations are occurring at the same time, which will likely include ROW clearing, installing foundations, hauling steel, and assembling and erecting structures. For the station work, the highest level of traffic will be during site grading and foundation installation. For the communication station sites, the highest level of traffic will be during grading and site preparation.

Detailed estimates of trips generated by transporting Project construction equipment will be provided by the construction contractor prior to construction.

### **3.1.3 Traffic Related to Timber Removal**

In forested areas, the Project will require removal of timber from the Project ROW and for construction and improvement of access roads. Specific timber harvest plans have not been finalized. Logs from timber clearing may be transported to nearby sawmills. Decisions regarding transportation routes for harvested timber will be made following completion of a timber harvest plan, and the number of log truck trips will be estimated when the timber harvest plan has been finalized. Logging slash will remain onsite if possible. For additional discussion regarding removal of timber in forested areas, see Exhibit K, Attachment K-2, ROW Clearing Assessment.

### **3.1.4 Impacts to V/C Ratios**

Based on the estimated trip generation numbers in Tables 4 and 6, a maximum of approximately 1,294 daily one-way vehicle trips are expected within any one construction spread. To facilitate traffic and other analyses, the two construction spreads are divided into smaller sections based on similar construction windows and seasonal weather restrictions. Not all construction sections will have the same number of concurrent construction activities, depending on how the construction contractor sequences and executes the Project. Some sections will have fewer daily vehicle trips. For the purposes of the traffic analysis, the spreads are divided into five sections with multi-use areas that could have additive traffic impacts. The sections are assumed to have approximately equal levels of activity. The 1,294 daily one-way trips per spread divided over five sections of more concentrated traffic results in 259 daily one-



## **ARTICLE 6.6 – PUBLIC STREET STANDARDS**

### **SECTION 6.6.001 - PURPOSE**

Upon the request of the La Grande City Council, a variety of street design standards have been reviewed and are now incorporated in the Land Development Code.

### **SECTION 6.6.002 - CLASS I IMPROVEMENT STANDARDS**

This classification will cover those streets that are designed to meet the standards for an expected life of twenty (20) years or more. The attached drawings shall be the minimum standard for those streets in this classification. All streets designated as Federal Aid Urban Streets (F.A.U.) shall be constructed under these design standards. Streets in this designation shall be constructed with sidewalks when at all possible in an effort to increase pedestrian safety. Collector streets are designed to withstand normal trucks of an HS 20 loading. Larger trucks are to utilize Arterial streets where at all possible. This level of development shall be the ultimate goal for all streets within the City of La Grande.

Possible means of financing available for this Class shall be methods A, B, C, D, E, F, G, and H in Section 6.6.006.

#### **A. Advantages**

1. The construction life is extended to a period above other City standards.
2. The visible aesthetics in relationship to having curbs and a blacktop surface with landscaping or concrete driveways and a sidewalk is generally appealing to the public.
3. Easy maintenance for the Public Works Department for cleaning and minor repair.
4. Storm sewer drainage is confined within the bounds of the curbs during minor flooding periods.
5. Parking is restricted to a solid barrier, that being the curb; this restricts parking in the area on the back side of the curb and confines travel to the street surface.
6. Defined areas for possible cross walks, signs, power poles, and other utilities that are restricted to the outside areas behind the curbs.
7. It allows for a wide range of financing methods and is to City standards for a ten (10) year Bancroft bonding.
8. Provides a dust free surface.

#### **B. Disadvantages**

1. The extreme high level of cost that is incurred with this type of development.

### **SECTION 6.6.003 - CLASS II IMPROVEMENT LEVEL**

Streets constructed in this classification shall be constructed to the same standards as Class I Streets with the exception of the form of drainage system. These streets shall meet the standards as shown on the attached drawing. This level of construction shall be only utilized in substitution for Class I Streets when it is determined by the City Council at the recommendation of the City Engineer or Engineering Superintendent, that an adequate drainage system cannot be installed for a Class I Street.

Table 6. Construction Vehicle Trips per Day per Construction Spread

Construction Crew Type	Construction Vehicles					
	Light Construction Vehicles			Heavy Construction Vehicles		
	Number of Pickups/ Mechanic Trucks (per day)	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)	Number of Other Vehicles	Number of One-way Trips on Public Roads (per day)	Total One-way Trips (per day)
Substation Construction	20	2	40	5	2	10
ROW Clearing	9	4	36	5	4	20
Roads/ Pad Grading	9	4	36	9	2	18
Foundations	9	2	18	5	8	40
Tower Lacing (assembly)	27	2	54	0	0	0
Tower Setting (erection)	20	2	40	0	0	0
Wire Stringing	9	4	36	9	4	36
Restoration	3	2	6	0	0	0
Blasting	5	4	20	0	0	0
Material Delivery	20	8	160	12	2	24
Mechanic and Equipment Mgmt.	5	6	30	0	0	0
Refueling	0	0	0	5	4	20
Dust Control	0	0	0	5	4	20
Construction Inspection	5	8	40	0	0	0
Concrete Testing	5	4	20	0	0	0
Environmental Compliance	9	6	54	0	0	0
Surveyors	5	3	30	0	0	0
<b>Totals</b>	—	—	<b>620</b>	—	—	<b>188</b>

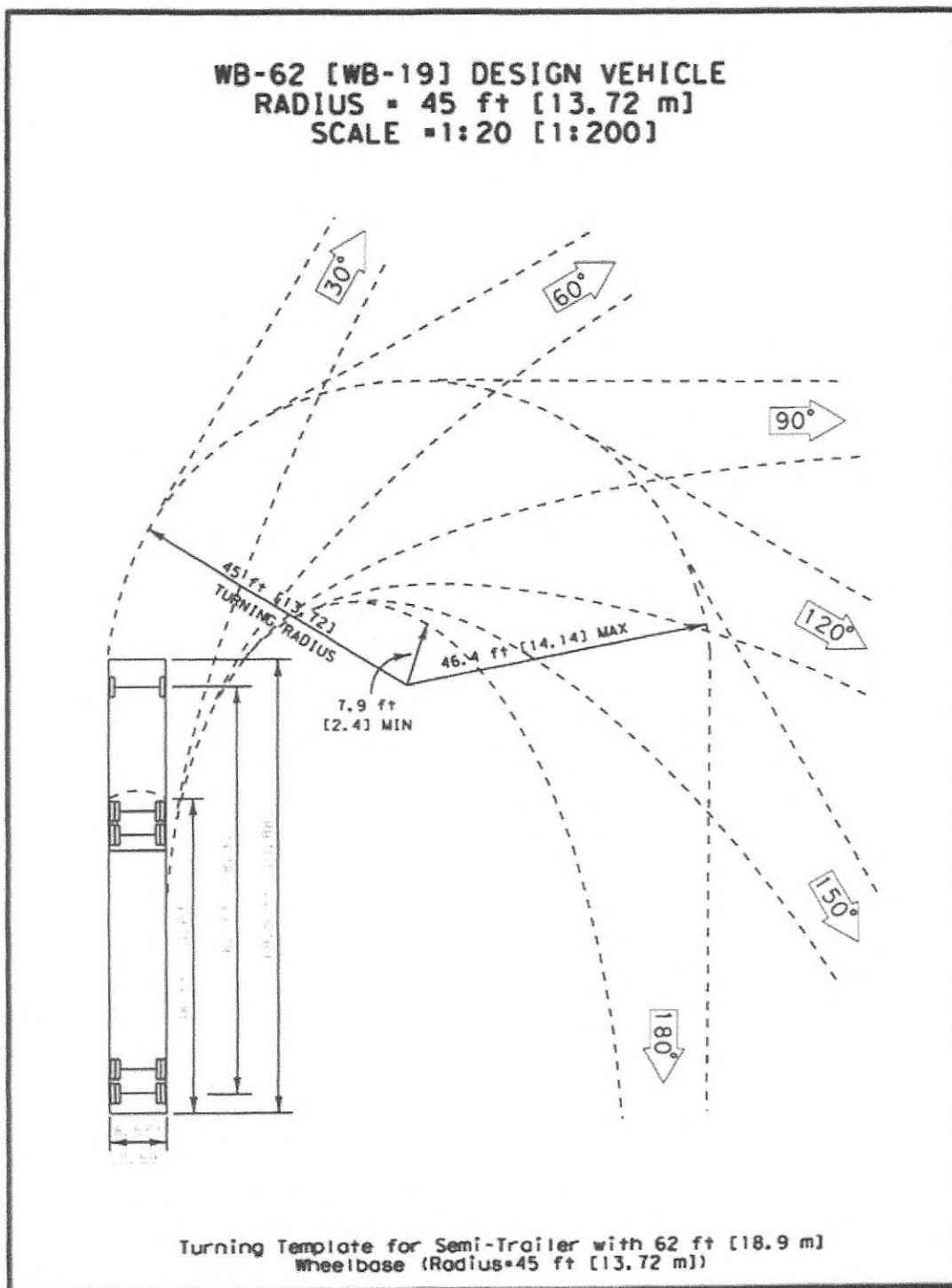
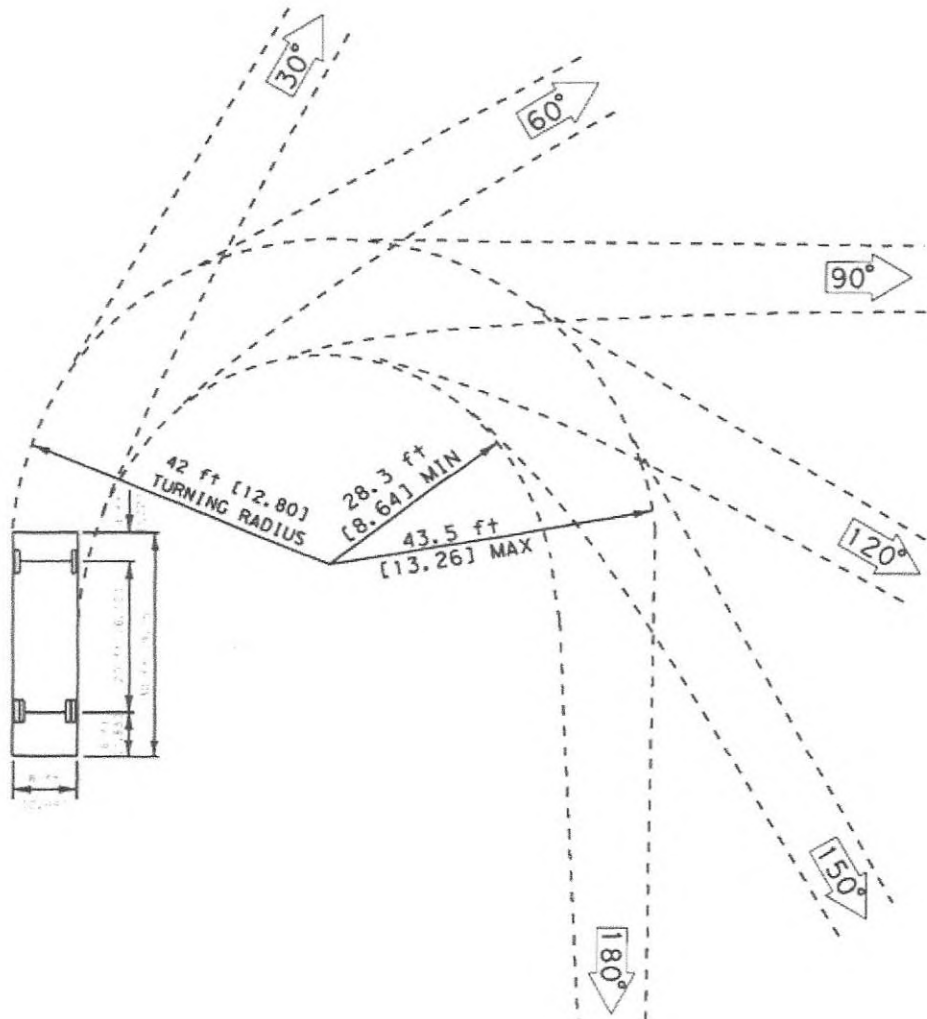


Figure 7-4. Turning Template for Semi-Trailer with 62 ft [18.9 m] Wheelbase, (not to scale). Click [here](#) to see a PDF of the image.



**SINGLE UNIT (SU) TRUCK DESIGN VEHICLE**  
**TURNING RADIUS = 42 ft [12.80 m]**  
**SCALE = 1:20 [1:200]**



Turning Template for Single Unit Trucks or Buses

Exhibit 15

**CITY OF LA GRANDE  
ORDINANCE NUMBER 3077  
SERIES 2009**

**AN ORDINANCE CONTROLLING VEHICULAR AND PEDESTRIAN TRAFFIC, PARADES  
AND PROCESSIONS AND ISSUANCE OF PERMITS; PROVIDING PENALTIES; AND  
REPEALING ORDINANCE NUMBER 2845, SERIES 1993; ALL AMENDING ORDINANCES  
AND ALL OTHER ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH;  
AND DECLARING AN EFFECTIVE DATE**

THE CITY OF LA GRANDE ORDAINS AS FOLLOWS:

**Section 1.** This Ordinance may be cited as the City of La Grande Uniform Traffic Ordinance.

**Section 2.** APPLICABILITY OF STATE TRAFFIC LAWS.

Oregon Revised Statutes, Chapter 153, and the Oregon Vehicle Code, ORS Chapter 801 and 822, as now constituted, are adopted by reference. Violation of an adopted provision of those chapters is an offense against the City.

**Section 3.** DEFINITIONS

In addition to those definitions contained in the Oregon state Motor Vehicle Code, the following words or phrases, except where the context clearly indicates a different meaning, shall mean:

a. Alley

A street or highway primarily intended to provide access to the rear or side of lots or buildings in urban areas and not intended for through vehicular traffic.

b. Bicycle

A bicycle is a vehicle that:

1. Is designed to be operated on the ground on wheels;
2. has a seat or saddle for use of the rider;
3. is designed to travel with not more than three (3) wheels in contact with the ground;
4. is propelled exclusively by human power; and,
5. has every wheel more than fourteen inches (14") in diameter or two (2) tandem wheels, either of which is more than fourteen inches (14") in diameter.

c. Bicycle Lane

That part of the highway, adjacent to the roadway, designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

d. Bicycle Path

A public way, not part of a highway, which is designated by official signs or markings for use by persons riding bicycles, except as otherwise specifically provided by law.

e. Block

The part of one side of a street lying between the two (2) nearest cross streets.

f. Central Business District



a. City Regulation of Special Movement of Oversized Load

The applicant shall submit an application to the City Manager or designee, showing the terminal points of the purported movement; the proposed route; the nature of the movement requested, including the weight and dimensions of the vehicle, load, machine, building, or structure to be moved; the time, date and duration of the proposed movement.

b. Special Movement Permit

A permit shall be required to move any vehicle, structure, or load on, or to access a street when, after preparation for movement, the vehicle, structure or load exceeds fourteen feet (14') in height, requires the use of guy wires, or could result in the blockage of a street. An approved application may serve as a permit, and a copy of the approved application shall be provided to the applicant.

**Section 17. TRUCK ROUTES**

- a. It shall be unlawful for any person, firm, or corporation to use, drive or operate any vehicle or combination of vehicles with a gross weight of 26,000, pounds or more upon any street of the City of La Grande, Oregon, except upon posted truck routes.
- b. Any vehicle with a gross weight over 26,000, pounds specifically picking up deliveries or making deliveries to any business or residence located on a street that is not a truck route will be exempted if the vehicle is driven from the truck route to the destination in the shortest, most direct, and safest route.
- c. The use of Jacob brakes shall not be allowed within the city limits of La Grande, Oregon.
- d. Truck routes will be posted as follows:
  1. Walnut street north from the city limits to C Avenue;
  2. C Avenue east from Walnut Street to Gekeler Avenue;
  3. Gekeler Avenue east to the city limits;
  4. 12th street south from Gekeler Avenue to the city limits;
  5. 2nd Street south from the city limits to Adams Avenue;
  6. Monroe Avenue east from Spruce Street to Highway 82;
  7. Jackson Avenue east from Spruce Street, and
  8. Spruce Street south from the city limits to Monroe.

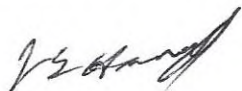
**Section 18. IMPOUNDMENT AND DETENTION OF VEHICLES**

- a. Whenever a vehicle is placed in a manner or location that constitutes an obstruction to traffic or a hazard to public safety, a police officer or enforcement officer shall order the owner or operator of the vehicle to remove said vehicle. If the vehicle is unattended, the officer or enforcement officer may cause the vehicle to be towed and stored at the owner's expense. The owner shall be liable for the costs of towing and storing, notwithstanding that the vehicle was parked by another or that the vehicle was initially parked in a safe manner but subsequently became an obstruction or hazard.



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

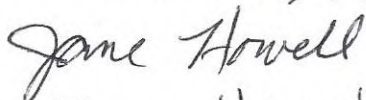


PRINTED NAME James E. Howell II

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SIGNATURE



PRINTED NAME Jane Howell

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EMAIL d.janehowell@gmail.com

SIGNATURE

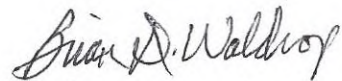


PRINTED NAME Lisa Waldrop

ADDRESS 475 Modelaire Dr.

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SIGNATURE

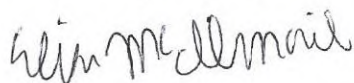


PRINTED NAME BRIAN D. WALDROP

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SIGNATURE



PRINTED NAME EUSE MCILMAIL

ADDRESS 476 MODELAIRES DR.

EMAIL mcilmail154@hotmail.com


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SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

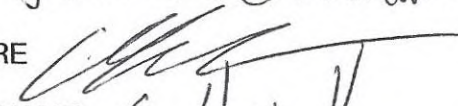
  
Jessie Huxell  
472 Modelaire Dr. LaGrande OR 97850

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

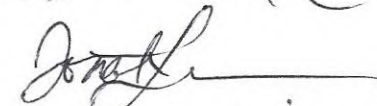
  
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CHRIS Huxell @ EMAIL.COM

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I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

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*John Barutz*

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John Barutz

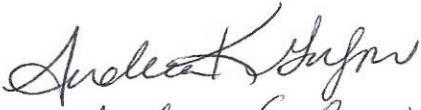
ADDRESS


484 Hawthorne LG, OR 97850


EMAIL





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SIGNATURE   
PRINTED NAME Andrea Gulzow  
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EMAIL foreverfamily33@aol.com

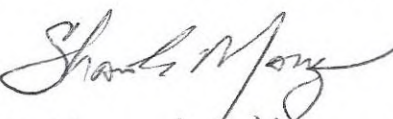
SIGNATURE   
PRINTED NAME Frances E. Lillard  
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SIGNATURE   
PRINTED NAME Brent H. Smith  
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EMAIL smithbrent@gmail.com

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PRINTED NAME M. Jeannette Smith  
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EMAIL kimheitstuman@hotmail.com

I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE: 

PRINTED NAME Shawn K. Mangum

ADDRESS 2905 E. M. Ave,

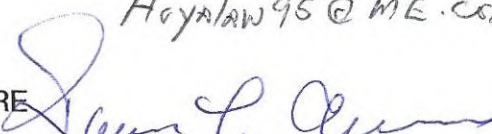
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SIGNATURE

PRINTED NAME

ADDRESS

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CONNIE L. ALLEN 541-9637720  
410 BALSA STREET LAGRANDE, OREGON 97858  
N/A

SIGNATURE

PRINTED NAME

ADDRESS

EMAIL

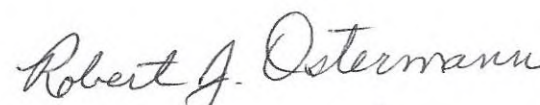
  
Linda Snyder  
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Robert J. Ostermann  
495 Modelaire Dr. La Grande, OR 97850

SIGNATURE

PRINTED NAME

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Robin J. Ostermann  
495 Modelaire Dr La Grande, OR 97850



I have read the attached letter regarding the use of the Modelaire/Hawthorne Loop and it expresses my concerns and my request to abandon the plan to use this residential loop for the project. As one of the undersigned I strongly oppose our community being used as a primary access point to build this transmission line. Furthermore, I oppose the current proposed preferred route close to the city limits of La Grande because it impacts in various other ways the daily lives of many residents of our community.

SIGNATURE

*Jonathan D. White*

PRINTED NAME

Jonathan D. White

ADDRESS

485 Modelaire Dr

EMAIL

jondwhite418@gmail.com

SIGNATURE

*Robin Stedfeld*

PRINTED NAME

Robin Stedfeld

ADDRESS

485 Modelaine Dr. La Grande

EMAIL

rstedfeld@yahoo.com

SIGNATURE

*Rita Allen*

PRINTED NAME

Rita Allen

ADDRESS

410 Balsa St. La Grande Or.

EMAIL

SIGNATURE

*Ruth Schumacher Yeates*

PRINTED NAME

Ruth Schumacher Yeates

ADDRESS

408 Sunset Drive La Grande, OR 97850

EMAIL

ruthschumacheryeates@gmail.com

SIGNATURE

*John Yeates*

PRINTED NAME

JOHN YEATES

ADDRESS

408 SUNSET DR. LA GRANDE, OR 97850

EMAIL

jyeates52@gmail.com



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SIGNATURE 

PRINTED NAME LOIS BARRY

ADDRESS P.O. Box 566, La Grande, OR 97850

EMAIL loisbarry31@gmail.com

SIGNATURE 

PRINTED NAME CATHY WEBB

ADDRESS 1708 CEDAR ST. LAGRANDE, OR 97850

EMAIL thunkski@gmail.com

SIGNATURE 

PRINTED NAME Jack L. Martin

ADDRESS 1412 Gilcrest Dr. LaGrande

EMAIL Buff Martin 27 @GMail.com

SIGNATURE 

PRINTED NAME GERALDINE BRASETH-PALMER

ADDRESS 1602 GILCREST DRIVE LA GRANDE, Ore 97850

EMAIL 


SIGNATURE 


PRINTED NAME Jean BAPH

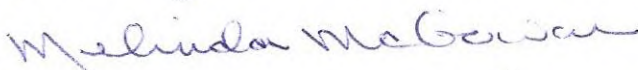
ADDRESS 1509 MADISON AVE LaGrande, OR 97850


EMAIL JBaph19@gmail.com


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SIGNATURE   
PRINTED NAME Damon Sexton  
ADDRESS 401 Balsa St La Grande, OR 97850  
EMAIL Sexton.damon@gmail.com

SIGNATURE   
PRINTED NAME Cory Sexton  
ADDRESS 401 Balsa Street La Grande OR 97850  
EMAIL Corytrix@gmail.com

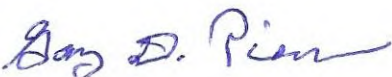
SIGNATURE   
PRINTED NAME Melinda McGowan  
ADDRESS 602 Sunset Dr.  
EMAIL melindamegowan@gmail.com

SIGNATURE   
PRINTED NAME Keith D. Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL Keithdhudson@gmail.com

SIGNATURE   
PRINTED NAME Laura Elly Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL ellyhudson@gmail.com



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SIGNATURE 

PRINTED NAME Gary D. Pierson

ADDRESS 489 Modelaire Drive, La Grande OR 97850

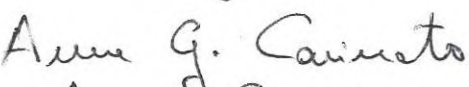
EMAIL —

SIGNATURE 

PRINTED NAME LYNN WHEELER DUNCAN

ADDRESS 489 Modelaire Drive, La Grande OR 97850

EMAIL rlwd1910@gmail.com

SIGNATURE 

PRINTED NAME Anne G. Cavinato

ADDRESS 86 Hawthorne Dr. La Grande, OR 97850

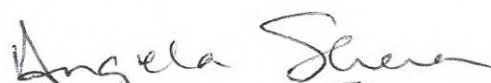
EMAIL acavinat@ecu.edu

SIGNATURE 

PRINTED NAME JOE HORST

ADDRESS 86 HAWTHORNE DR. LA GRANDE OR.

EMAIL joehorst@comi.com

SIGNATURE 

PRINTED NAME ANGELA Sherer

ADDRESS 91 W. Hawthorne Dr. LaGrande, OR 97850

EMAIL asherer@frontier.com



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SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
ADDRESS 97 W Hawthorne Dr, La Grande, Or. 97850  
EMAIL asherer@frontier.com

SIGNATURE *Heather M. Null*  
PRINTED NAME Heather M. Null  
ADDRESS 492 Modelaire Dr. La Grande, OR 97850  
EMAIL hnull@comi.com

SIGNATURE *Bert R. Frewing*  
PRINTED NAME Bert R. Frewing  
ADDRESS 709 South 12<sup>th</sup> Street La Grande, OR 97850  
EMAIL jeanfrewing@gmail.com

SIGNATURE *Lindsey McCullough*  
PRINTED NAME Lindsey McCullough  
ADDRESS 406 Balsa St., La Grande, OR 97850  
EMAIL lindz\_mm91@hotmail.com

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

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SIGNATURE *Merle E. Comfort*  
PRINTED NAME MERLE E. COMFORT  
ADDRESS 209 SCORPIO DRIVE LA GRANDE OR 97850  
EMAIL merlecomfort@gmail.com

SIGNATURE *Robin L. Maille*  
PRINTED NAME Robin Maille  
ADDRESS 401 Cedar St., La Grande  
EMAIL r-maille@icloud.com

SIGNATURE *Bruce C Kevan*  
PRINTED NAME Bruce C Kevan  
ADDRESS 1511 W Ave LG  
EMAIL bruce.kevan@lagrandesd.org

SIGNATURE *Carol S. Summers*  
PRINTED NAME CAROL S. SUMMERS  
ADDRESS 2811 Bekeler Ln - La Grande, OR  
EMAIL carolsummers1938@gmail.com

SIGNATURE *Caroline Kaye Juniper*  
PRINTED NAME Caroline Kaye Juniper  
ADDRESS 406 NTH ST. LaGrande - OR 97850  
EMAIL

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SIGNATURE *Gerald D. Juniper*  
PRINTED NAME Gerald Darwin Juniper  
ADDRESS 406 4<sup>th</sup> St. LaGrande, OR. 97850  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL



## **TARDAEWETHER Kellen \* ODOE**

---

**From:** Dale Mammen <dmammen@eoni.com>  
**Sent:** Thursday, August 15, 2019 5:28 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposal Order 5/23/2019  
**Attachments:** Scan 2019-8-15 17.14.06.pdf

To: Chairman Beyeler and Members of the Council

Find attached a letter sign by me and 46 other residents of La Grande expressing our concerns regarding the B2H Project and requesting that EFSC Deny the Site Certificate.

I have also sent a bound copy of this material by US Postal Service.

Virginia L. Mammen  
405 Balsa  
La Grande, Oregon 97850

August 10, 2019

Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E.  
Salem, Oregon. 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018:Draft Proposed Order.

Dear Chair Beyeler and Members of the Council:

My comment is about the predicted noise levels resulting from construction and operation of the proposed Boardman to Hemingway Transmission Line Project. I would like to address the noise coming from the blasting and rock breaking specifically above the area at the top of Modelaire Drive 1 both to the north and the south of that area and also the construction traffic noise that that will impact the west hills and the area below.

In Exhibit X page X-9 3.3.1.1 2 blasting and rock breaking is mentioned saying that "Modern blasting techniques include the electronically controlled ignition of multiple small explosive charges in an area of rock that are delayed fractions of second, resulting in a total event that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140dBA at the blast location or over 90 dBA within 500 feet." This sounds oh so "don't worry about it, it will be OK just over in a split second." Living in this area off Modelaire Drive, I don't find this at all comforting. And the fact that this will be overseen by properly licensed personnel and all of the necessary authorizations doesn't help anything either.

The area in question, which for such inordinate construction is extremely close to many residents, has been my home for over 50 years and during

related medical problems and exhibit various reactions to loud noises.<sup>10</sup>  
These children also live in the neighborhoods to be affected by the noise so they would be impacted coming and going to school, at home and also while at school. To impose the constant possibility of loud noises is cruel, disrespectful and totally unacceptable. <sup>11</sup>

For a project like this involving blasting and heavy machinery noise so close to homes, schools, and medical facilities impacting hundreds of peoples' daily lives, the day to day agitation, wondering what is coming next, fear and being on constant alert are not just addressed by some type of mitigation but must be addressed by a route that is much less impactful to peoples' safety, sanity, and health.

Sincerely,

A handwritten signature in cursive script that reads "Virginia L. Mammen".

Virginia L. Mammen

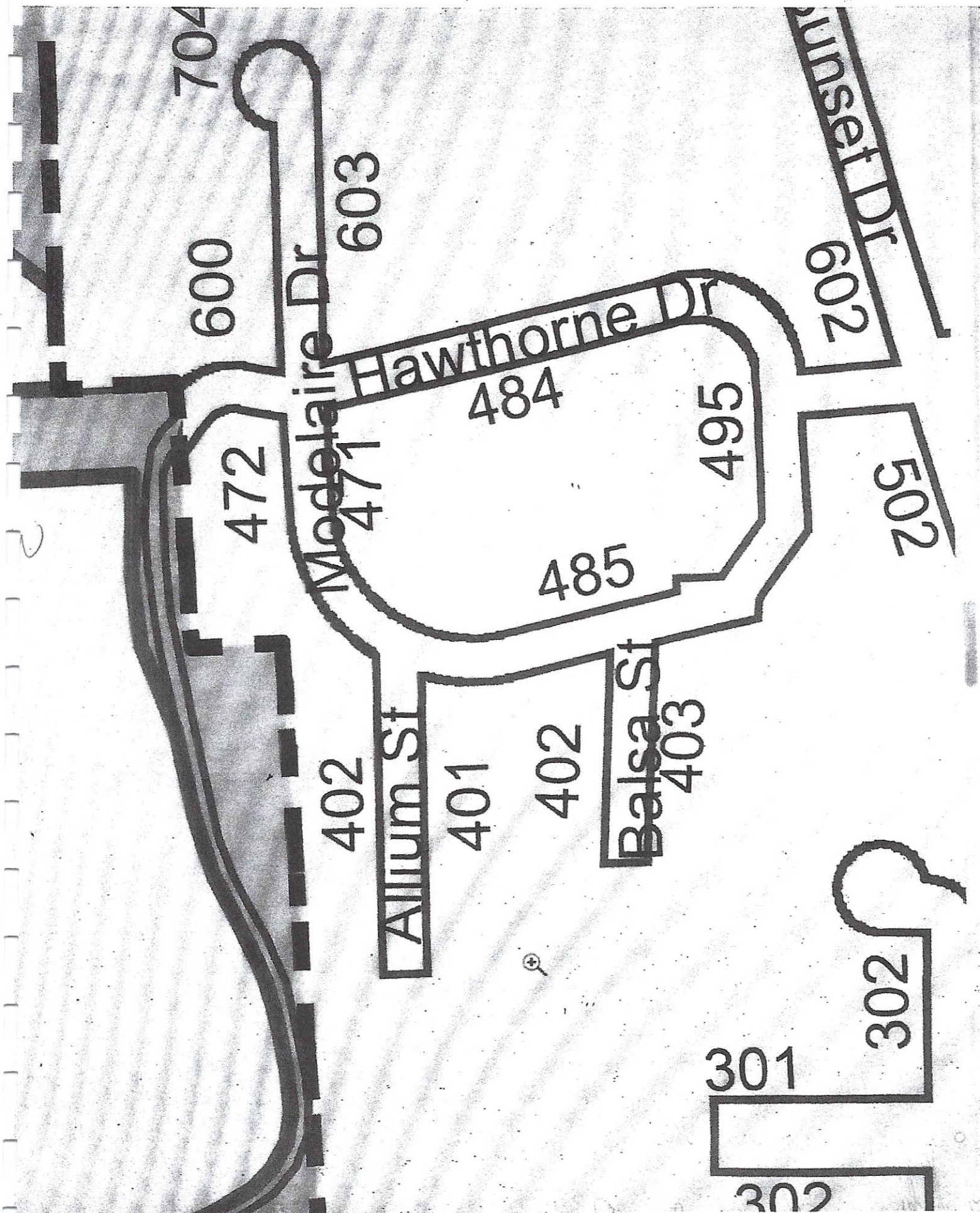
405 Balsa

La Grande, Oregon 97850

gmammen@eoni.com



N





### 3.3 Predicted Noise Levels

OAR 345-021-0010(1)(x)(A): Predicted noise levels resulting from construction and operation of the proposed facility.

#### 3.3.1 Construction Noise

##### 3.3.1.1 Predicted Construction Noise Levels

Project construction will occur sequentially, moving along the length of the Project route, or in other areas such as near access roads, structure sites, conductor pulling sites, and staging and maintenance areas. Overhead transmission line construction is typically completed in the following stages, but various construction activities may overlap, with multiple construction crews operating simultaneously:

- Site access and preparation
- Installation of structure foundations
- Erecting of support structures
- Stringing of conductors, shield wire, and fiber-optic ground wire

The following subsections discuss certain construction activities that will periodically generate audible noise, including blasting and rock breaking, implosive devices used during conductor stringing, helicopter operations, and vehicle traffic.

#### **Blasting and Rock Breaking**

Blasting is a short-duration event as compared to rock removal methods, such as using track rig drills, rock breakers, jackhammers, rotary percussion drills, core barrels, or rotary rock drills. Modern blasting techniques include the electronically controlled ignition of multiple small-explosive charges in an area of rock that are delayed fractions of second, resulting in a total event duration that is generally less than a second. Impulse (instantaneous) noise from blasts could reach up to 140 dBA at the blast location or over 90 dBA within 500 feet.

Lattice tower foundations for the Project typically will be installed using drilled shafts or piers; however, if hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture the rock to reach the required depth to install the structure foundations. Final blasting locations will not be identified until an investigative geotechnical survey of the analysis area is conducted during the detailed design.

The contracted blasting specialist will prepare a blasting plan that demonstrate compliance with applicable state and local blasting regulations, including the use of properly licensed personnel and the acquisition of necessary authorizations. The Framework Blasting Plan is set forth in Exhibit G, Attachment G-5.

#### **Implosive Devices**

An implosive conductor splice consists of a split-second detonation with sound and flash. Implosive splicing activities are anticipated to be limited to daytime hours. A blasting plan will be developed by an individual certified and licensed to perform the work. The plan will communicate all safety and technical requirements including, but not limited to, delineation of the controlled access zone and distance away from residences.



## **Public Services**

### **OAR 345-022-0110**

This standard ensures that the proposed facility will not affect the ability of service providers in local communities to provide public services, such as fire protection or education. The applicant must assess the proposed facility's need for water and for disposal of wastewater, storm water and solid waste. The applicant must also evaluate the expected population increases in local communities resulting from construction and operation of the facility; and must address all permanent and temporary impacts of the facility on housing, traffic safety, police and fire protection, health care and schools. The Council must determine whether the applicant has identified potential adverse impacts to service providers and proposed adequate mitigation to ensure that there will be no significant adverse effect on the ability of a service provider to provide services. In considering the impacts, the Council solicits comments from affected local governments, fire or police departments, school districts and health care agencies.

## **Waste Minimization**

### **OAR 345-022-0120**

This standard requires the Council to evaluate the applicant's proposal to minimize solid waste and wastewater generated by construction and operation of the proposed facility. The standard requires recycling of wastes, if feasible, or proper waste disposal if recycling is not feasible.

The applicant must evaluate the types of waste products that would be produced during construction and operation of the proposed facility and estimate the amounts or volume of waste products. The applicant must propose appropriate methods to handle the waste through collection, storage and disposal. Compliance with the standard assures that the applicant will reduce the amount of waste generated and dispose of waste in a responsible manner.

## **Need for a Facility**

### **OAR 345-023-0005**

This standard requires the applicant for non-generating energy facilities (such as electric transmission lines) to demonstrate the need for the proposed facility. The Council's rules allow an applicant to demonstrate need for a non-generating facility through one of several methods, including the "Least-Cost Plan Rule" (OAR 345-023-0020) or the "System Reliability Rule for Electric Transmission Lines" (OAR 345-023-0030). Under the Least-Cost Plan Rule, the applicant meets this standard if the proposed transmission line was included in an Integrated Resource Plan that has been acknowledged by the Oregon Public Utilities Commission (OPUC). More information about the OPUC and the Integrated Resource Plan acknowledgement process can be found at [www.puc.state.or.us](http://www.puc.state.or.us).

## **Specific Standards for Wind Facilities**

### **OAR 345-024-0010 and 345-024-0015**

This standard requires the Council to evaluate applications for wind energy facilities to ensure that applicants can design, construct and operate the facility so that the public is not endangered by moving turbine blades or electrical equipment, and that the applicant can design, construct and operate wind turbines to prevent structural failure that could endanger public safety. Siting standards for wind facilities also require the applicant to reduce cumulative adverse environmental effects in the vicinity by using existing roads, if possible, placing collection lines underground, designing the facility to avoid impacts to vulnerable wildlife in the area (especially birds and bats), and designing the facility to minimize adverse visual features, including using the minimum amount of lighting necessary to meet the requirements of the Federal Aviation Administration for protecting aircraft.

## **Specific Standards for Transmission Lines**

### **OAR 345-024-0090**

This standard requires that the Council evaluate transmission lines under Council jurisdiction to ensure they are designed, constructed and operated to limit the strength of electromagnetic fields in areas where those lines are accessible to the public.





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## Department of Environmental Quality

### Chapter 340

#### Division 35

#### NOISE CONTROL REGULATIONS

**340-035-0035****Noise Control Regulations for Industry and Commerce****(1) Standards and Regulations:**

(a) **Existing Noise Sources.** No person owning or controlling an existing industrial or commercial noise source shall cause or permit the operation of that noise source if the statistical noise levels generated by that source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 7, except as otherwise provided in these rules. [Table not included. See ED. NOTE.]

**(b) New Noise Sources:**

(A) **New Sources Located on Previously Used Sites.** No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies. [Table not included. See ED. NOTE.]

**(B) New Sources Located on Previously Unused Site:**

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b)-(f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

**(iii) For noise levels generated or caused by a wind energy facility:**

(I) The increase in ambient statistical noise levels is based on an assumed background L50 ambient noise level of 26 dBA or the actual ambient background level. The person owning the wind energy facility may conduct measurements to determine the actual ambient L10 and L50 background level.

(II) The "actual ambient background level" is the measured noise level at the appropriate measurement point as specified in subsection (3)(b) of this rule using generally accepted noise engineering measurement practices. Background noise measurements shall be obtained at the appropriate measurement point, synchronized with wind speed measurements of hub height conditions at the nearest wind turbine location. "Actual ambient background level" does not include noise generated or caused by the wind energy facility.

(III) The noise levels from a wind energy facility may increase the ambient statistical noise levels L10 and L50 by more than 10 dBA (but not above the limits specified in Table 8), if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located. The easement or covenant must authorize the wind energy facility to increase the ambient statistical noise levels, L10 or L50 on the sensitive property by more than 10 dBA at the appropriate measurement point.

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(2) Compliance. Upon written notification from the Director, the owner or controller of an industrial or commercial noise source operating in violation of the adopted rules shall submit a compliance schedule acceptable to the Department. The schedule will set forth the dates, terms, and conditions by which the person responsible for the noise source shall comply with the adopted rules.

(3) Measurement:

(a) Sound measurements procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1), or to such other procedures as are approved in writing by the Department;

(b) Unless otherwise specified, the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from that point on the noise sensitive building nearest the noise source;

(B) That point on the noise sensitive property line nearest the noise source.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, persons owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1);

(b) Nothing in this rule shall preclude the Department from conducting separate or additional noise tests and measurements. Therefore, when requested by the Department, the owner or operator of an industrial or commercial noise source shall provide the following:

(A) Access to the site;

(B) Reasonable facilities, where available, including but not limited to, electric power and ladders adequate to perform the testing;

(C) Cooperation in the reasonable operation, manipulation, or shutdown of various equipment or operations as needed to ascertain the source of sound and measure its emission.

(5) Exemptions: Except as otherwise provided in subparagraph (1)(b)(B)(ii) of this rule, the rules in section (1) of this rule shall not apply to:

(a) Emergency equipment not operated on a regular or scheduled basis;

(b) Warning devices not operating continuously for more than 5 minutes;

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles;

(d) Sounds resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad only to the extent that such equipment or facility is regulated by pre-emptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; but this exemption does not apply to any standard, control, license, regulation, or restriction necessitated by special local conditions which is approved by the Administrator of the EPA after consultation with the Secretary of Transportation pursuant to procedures set forth in Section 17(c)(2) of the Act;

(e) Sounds created by bells, chimes, or carillons;

(f) Sounds not electronically amplified which are created by or generated at sporting, amusement, and entertainment events, except those sounds which are regulated under other noise standards. An event is a noteworthy happening and does not include informal, frequent, or ongoing activities such as, but not limited to, those which normally occur at bowling alleys or amusement parks operating in one location for a significant period of time;

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment;

(i) Sounds created by lawn care maintenance and snow removal equipment;

(j) Sounds generated by the operation of aircraft and subject to pre-emptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not pre-emptively regulated by the federal government or controlled under OAR 340-035-0045;



## Controlling the Adverse Effects of Blasting

This module addresses the control of offsite impacts that result from blasting, namely:

- vibrations,
- airblast, and
- flyrock.

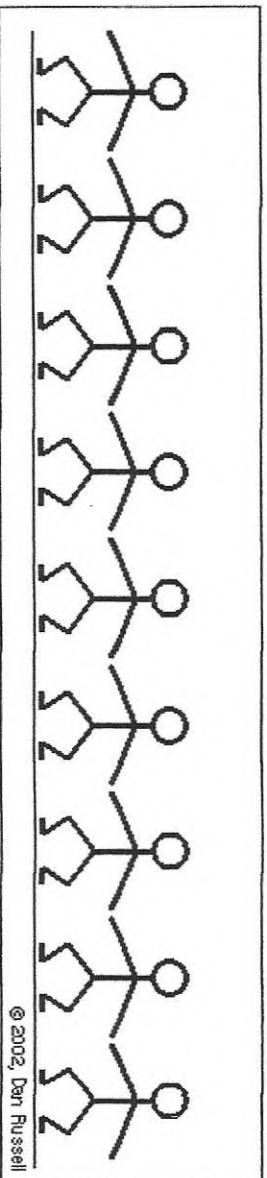
Much of the information in the module is derived from the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The performance standards apply to all surface coal mines. Similar standards have been adopted on some State and local levels and applied to non-coal blasting operations such as quarrying and construction.





## Part I: Ground Vibrations, Airblast, and Flyrock

Explosive energy is used to break rock. However, the use of this energy is not 100-percent efficient. Some of the energy escapes into the atmosphere to generate **airblast or air vibrations**. Some of the energy also leaves the blast site through the surface soil and bedrock in the form of **ground vibrations**.



Both air and ground vibrations create waves that disturb the material in which they travel. When these waves encounter a structure, they cause it to shake. Ground vibrations enter the house through the basement and airblast enters the house through the walls and roof.

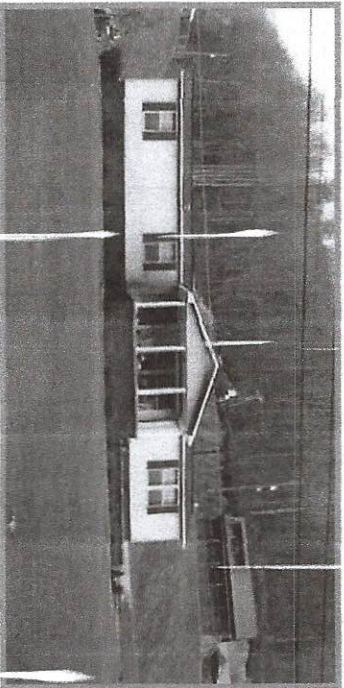
Airblast may be audible (noise) or in-audible (concussion). When outside a house the blast may be heard because of the noise, however noise has little impact on the structure. The concussion wave causes the structure to shake and rattles objects hanging on walls or sitting on shelves. This "interior noise" will alarm and startle people living in the house.

**Flyrock** is debris ejected from the blast site that is traveling through the air or along the ground. Flyrock the single most dangerous adverse effect that can cause property damage and personal injury or death.



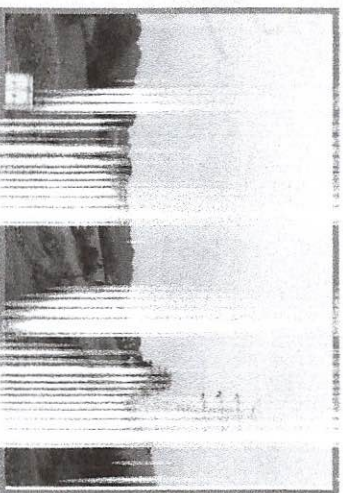
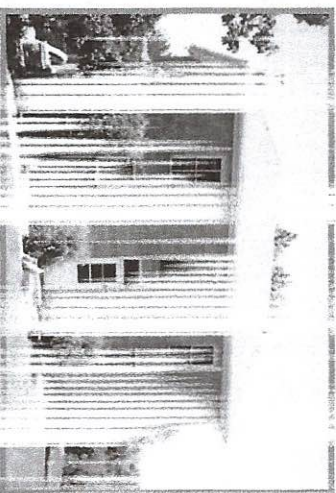
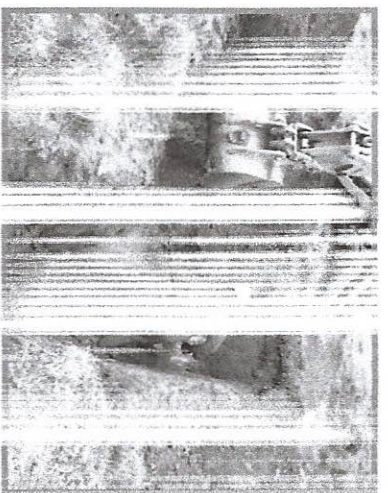
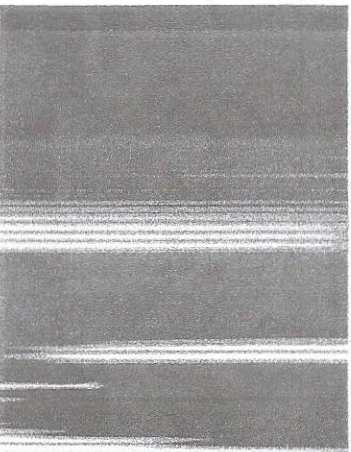
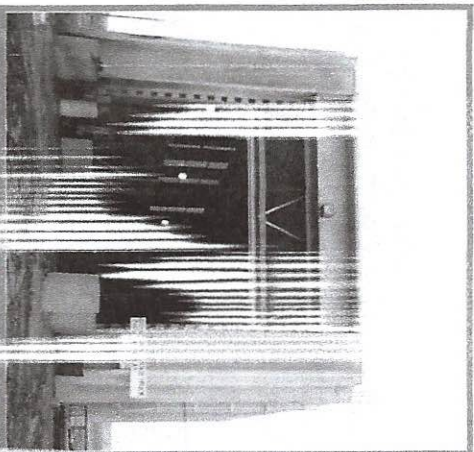
# Blasting Impacts on Structures

Both above-ground and below-ground structures are susceptible to vibration impacts. Structures can include onsite mine offices and buildings, as well as offsite residences, schools, churches, power-transmission lines, and buried pipelines. Some of these structures may include historic or cultural features sensitive to even low levels of vibrations.



It is important to understand:

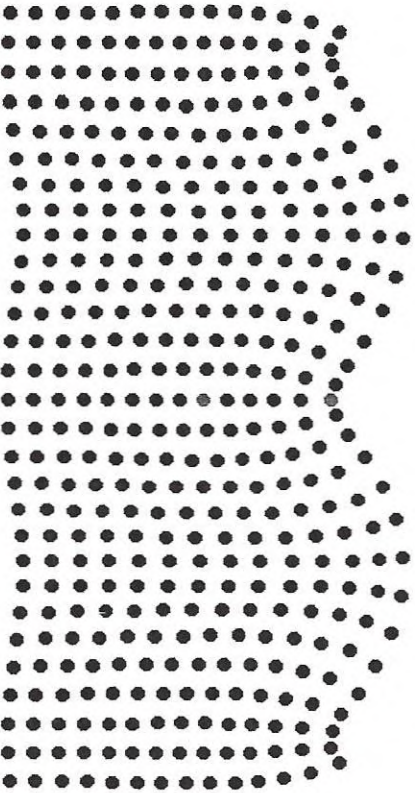
1. the causes of ground vibrations and airblast, and
2. what practices can be followed to control and minimize the adverse effects





## Ground Vibrations

Ground vibrations propagate away from a blast site as Rayleigh (or surface) waves. These waves form a disturbance in the ground that displaces particles of soil or rock as they pass by. Particle motions are quite complicated. At the ground surface (free boundary), measured particle motions have the greatest displacements, and displacements decrease with depth (see the illustration below). At a depth of between 20 to 50 feet below ground surface, particle displacements are barely detectable. Structures that are well coupled to the ground tend to move with this motion; structures buried in the ground are less affected by surface motions.



©1999, Daniel A. Russell

Ground vibrations are measured in terms of **particle velocity** and are reported in inches per second (ips) or the speed at which a particle of soil or rock moves.

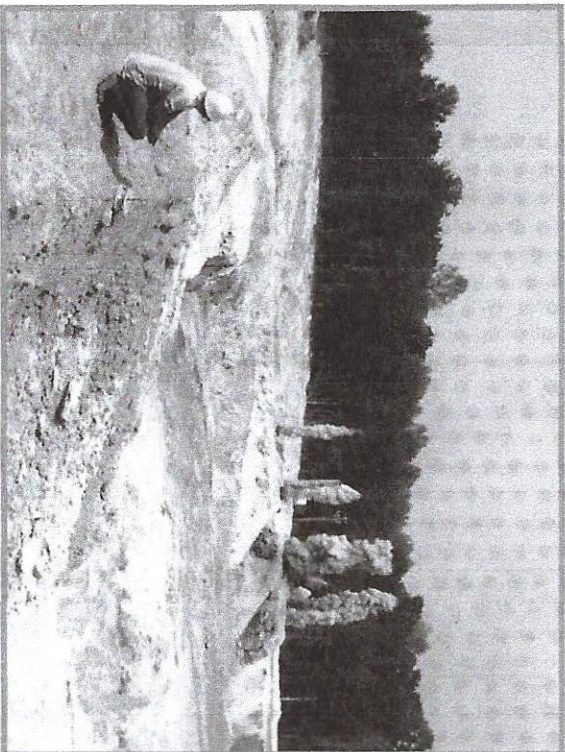
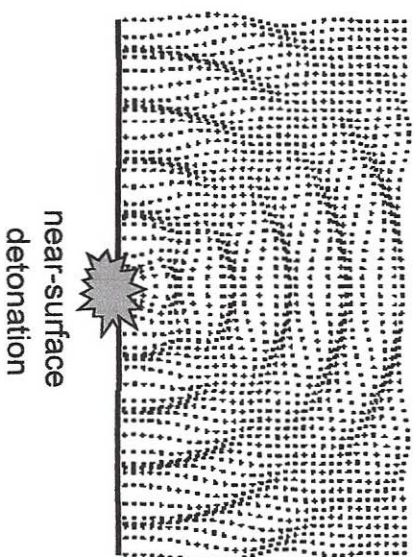
At typical blasting distances from residential structures, the ground only moves with displacements equal to the thickness of a piece of writing paper. In terms of displacement, this equates to hundredths of an inch; visually, such movement cannot be detected.



# Airblast

2 Airblast is measured as a pressure in pounds per square  
5 inch (psi) and is often reported in terms of **decibels (dB)**.

Airblast is a pressure wave that that may be audible or in-audible. Elevated airblast levels are generated when explosive energy in the form gases escape from the detonating blast holes. Energy escapes either through the top stemming or through fractures in the rock along the face or at the ground surface.



Airblast radiates outward from the blast site in all directions and can travel long distances. Sound waves travel much slower (1,100 ft/s) than ground vibrations (about 5,000 – 20,000 ft/s). Hence, airblast arrives at offsite structures later than do ground vibrations.

Both ground vibrations and airblast cause structures to shake structures. Occupants in structures that are located far from a blast may experience shaking from vibration and airblast as two separate, closely spaced events. This can be particularly bothersome, as it prolongs the duration of structure shaking and leads the property owner to think that two separate blasts occurred.



# Structure Response

As ground and air vibrations reach a structure, each will cause it to shake. Structure response is dependant on the vibration characteristics (frequency and amplitude) and structure type.

Ground Vibrations enter the house through the basement. This is like shaking the bottom of a flag pole. Movement at the top of the pole depends on how (frequency) and how hard (amplitude) the bottom of the pole is shaken. If shaken at just the right pace, or at the pole's natural frequency, the top will move significantly compared to the bottom. Motion at the top is amplified from the bottom motion.

All blast damage studies have measured incoming ground vibrations at the ground surface. The observed structure amplifications were typically between 1 to 4 times the ground vibration. Structure response below ground level is the same or less than the incoming vibrations

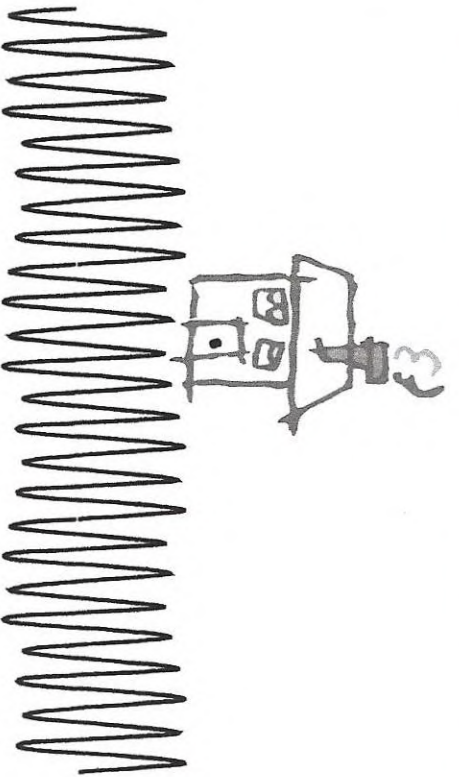
Airblast enters the house through the roof and walls. Like ground vibrations, the frequency and amplitude of the vibrations affect structure response. However the low frequency events (concussion) that most strongly affect structures is normally only a one or two cycle event.

Due to the different arrival times of ground and air vibrations, occupants may feel two distinct impacts on the house.

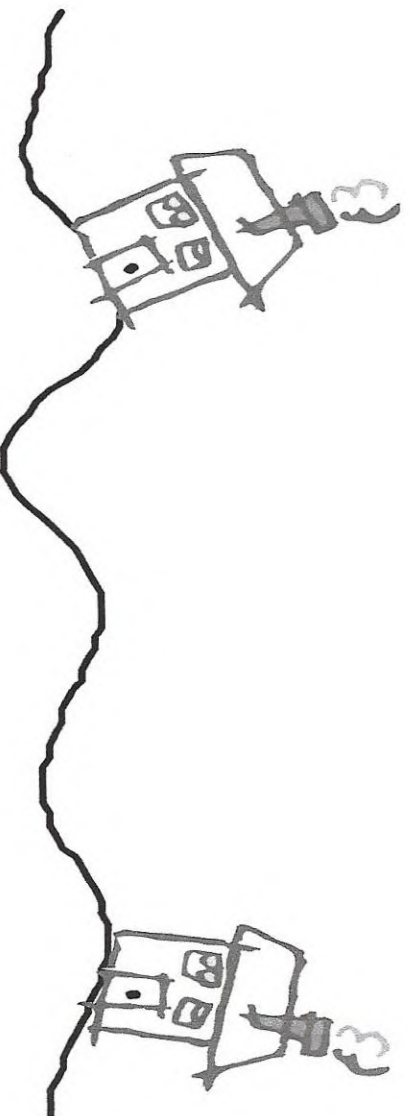


# Ground Vibration Structure Response

Exhibit 59



On the other hand, low-frequency wave cycles are long as compared with the dimensions of structures. Accordingly, low frequencies tend to efficiently couple energy into structures and to promote higher-amplitude, long-duration shaking.



High frequencies do not promote structure shaking. The length of a single high-frequency wave cycle is short as compared with the dimension of a structure. A structure does not significantly respond to high frequencies.



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## A noisy problem

***People often become more sensitive to noise as they age, which can affect their mental and physical health.***

Published: March, 2019

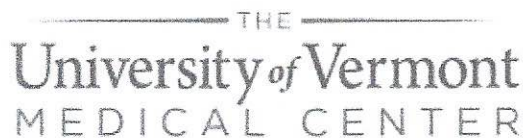


Image: © Juanmonino/Getty Images

Are you more sensitive to noises than you used to be? Do certain sounds now feel too loud and jarring? Don't worry; it's actually quite normal.

Age-related hearing loss is common among older adults and affects about two-thirds of men in their 70s and 85% of men ages 80 and older. Although it's not clear why, this can also make people hypersensitive to sounds that they used to tolerate easily, which in turn can affect their well-being.

"Exposure to noises from crowds, traffic, and other everyday sounds can become harder to tolerate and increase stress levels, leading to anxiety and a reduction in overall quality of life," says Dr. Stephanie Tompkins, an audiologist with Harvard-affiliated Massachusetts Eye and Ear. "As your sensitivity to noises increases, this can lead to greater isolation, too, as you may try to avoid potentially noisy places and situations."



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Quiet in the Hospital: How Noise...

## Quiet in the Hospital: How Noise Reduction Helps Patients Heal

on June 7, 2018 (<https://medcenterblog.uvmhealth.org/innovations/hospital-noise-reduction/>) in Innovation  
(<https://medcenterblog.uvmhealth.org/category/innovations/>) by UVM Medical Center  
(<https://medcenterblog.uvmhealth.org/author/uvmmedcenter/>)

Noise. It is present in almost every aspect of our lives. From the traffic in the streets, to the fan that provides us white noise in the background to sleep, noise exists. Unfortunately, like stress, too much of it can have a negative impact on a person's health and rest. Some sounds we do like to hear, such as birds chirping, signaling spring in Vermont, but what about sounds in a hospital?

Many of us get admitted to hospitals when we are too sick to take care of ourselves at home. We expect exceptional care from physicians and nurses and, of course, to rest in order to help our bodies heal. We understand that some noises in a hospital are necessary for care; however, others simply aren't.

### The Sounds of a Hospital

Many organizations, including the UVM Medical Center, have high tech equipment, which greatly assists in the delivery of care to our patients, but can also be noisy. Sometimes, healthcare providers are the source of the noise as we interact and communicate with our patients and other health team members.

Another factor is visits from families and friends during visiting hours. It is difficult when one's roommate is trying to rest in the opposite bed. Yet, we need to be cognizant of noise in patient care areas as sounds can be magnified and misinterpreted, increasing agitation and even confusion for some patients.

We become accustomed to the noise; our patients are not.

### The Research on Noise, Quiet, and Healing



Research has shown that noise plays a negative role in healing and that decreasing noise in patient care areas aids in healing processes and helps facilitate speedier recoveries for patients. Patients are able to heal, sleep better and recover more quickly when able to rest. A quieter environment can also help decrease burnout for hospital staff.

Studies show that patients are more likely to develop negative side effects from a noisy hospital, such as sleep disturbances, elevated blood pressure and heart rate, and increased use of pain medications.

Noise can also increase annoyance levels for staff. One study indicated noise, such as talking inside and outside patient rooms, is the most common source of noise as well as visitors' voices, TVs, and behaviors of other patients.

Research concluded that best practices to eliminate noise from talking included staff education about noise reduction, public indicators such as sound monitors, a quiet time protocol, and lower cost environmental fixes, such as fixing noisy doors and squeaky wheels. Lastly, by introducing scripting with routine monitoring, patients' perception of quietness increased and the perception of noise decreased.

## How We Address Noise at the UVM Medical Center

We introduced the "Culture of Quiet" Organizational initiative. The Nursing Professional Governance Patient and Family Experience Global council continued this work. After convening a small task force of nurses and assessing current quiet strategies, we introduced the following tactics:

- Many hospital units have designated 'quiet hours' with automatically dimming of lights at quiet hour intervals.
- Signage is visible in most patient care areas to help keep patients, family, and visitors aware. Throughout the hospital, you will see signs with a relaxing pair of Adirondack chairs and the sun setting with details on when a unit has quiet hours.
- Many semi-private rooms have windows in doors, so doors can be closed allowing for patient rest.
- We offer headphones for TVs and earplugs to help minimize sounds.
- In-patient kits contain a sleeping mask and other comfort items that can be provided at time of admission. Each kit contains a card and explains, 'the best healing occurs in a quiet environment.'
- New education material is available for staff, patients and visitors-just ask to review the next time visiting.
- Some units offer white noise machines, others have this built in.
- Noisy equipment such as wheels and doors can be tagged and replaced.
- Our facility and distribution staff have changed their cleaning and supply delivery schedules to accommodate patient care.
- Healthcare teams within the hospital are focusing efforts to cluster patient care to minimize interruptions to provide restful moments.

## How you can help us.

We ask patients and visitors to hold us accountable when sounds are too loud. We want our community to alert us when noise levels are high and we will do what we can to minimize sound. In turn, we ask that all members of the healthcare team, patients, family, and friends be aware to keep voices soft, cell phones on vibrate, and hold each other accountable for these are the times of the day when our patients take pause to rest and positively impact their healing.



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# Dangerous Decibels: Hospital Noise More Than a Nuisance

By Diane Sparacino, Staff Writer

Imagine a world where hospitals have become so noisy that the annoyance has topped hospital complaints, even more than for the tasteless, Jell-O-laden hospital food (Deardorff, 2011). If you're a nurse, you know that we're already there – with noise levels reaching nearly that of a chainsaw (Garcia, 2012). In fact, for more than five decades, hospital noise has seen a steady rise (ScienceDaily, 2005).

But it wasn't always that way. At one time, hospitals were virtually noise-free like libraries – respected spaces, preserved as quiet zones. The culture was such that a loud visitor might be silenced by a nurse's purposeful glare or sharply delivered "Shhh!" As early as 1859, the importance of maintaining a quiet environment for patients was a topic for discussion. In Florence Nightingale's book, "Notes on Nursing," she described needless noise as "the most cruel absence of care" (Deardorff, 2011).

Fast forward to 1995, when the World Health Organization (WHO) outlined its hospital noise guidelines, suggesting that patient room sound levels not exceed 35 decibels (dB). Yet since 1960, the average daytime hospital noise levels around the world have steadily risen to more than double the





acceptable level (from 57 to 72 dB), with nighttime levels increasing from 42 to 60 dB. WHO found that the issue was not only pervasive, but high noise levels remained fairly consistent across the board, despite the type of hospital (ScienceDaily, 2005).

Researchers at Johns Hopkins University began to look into the noise problem in 2003. They maintained that excessive noise not only hindered the ability for patients to rest, but raised the risk for medical errors. Other studies blamed hospital noise for a possible increase in healing time and a contributing factor in stress-related burnout among healthcare workers (ScienceDaily, 2005).

Technology is, of course, partly to blame. State-of-the-art machines, banks of useful alarms, respirators, generators, powerful ventilation systems and intercoms all add up to a lot of unwanted racket. When human voices are added to the mix, (i.e., staff members being forced to speak loudly over the steady din of medical equipment), it's anything but a restful environment. For the recovering patient in need of sleep, that can be a real issue (Deardorff, 2011).

Contributing to the problem, experts say, are the materials used in hospitals. Because they must be easily sanitized, surfaces cannot be porous where they could harbor disease-causing organisms. Rather than using noise-muffling materials like carpet, acoustic tiles and other soft surfaces, hospitals have traditionally been outfitted using smooth, hard surfaces – especially in patient rooms. Good for cleanliness – not so great for dampening sounds, which tend to bounce around the typical hospital (Deardorff, 2011).

Which brings us to the most recent research, published January 2012 in the *Archives of Internal Medicine*. In the report, Jordan Yoder, BSE, from the Pritzker School of Medicine, University of Chicago, and his colleagues associated elevated noise levels with “clinically significant sleep loss among hospitalized patients,” perhaps causing a delay in their recovery time (Garcia, 2012). During the 155-day study period, researchers examined hospital sound levels. The numbers far exceeded (WHO) recommendations for average hospital-room noise levels, with the peak noise at an average 80.3 dB – nearly as loud as a chainsaw or electric sander (85 dB), and well over the recommended maximum of 40 dB. And while nights tended to be quieter, they were still noisier than recommended allowances, with “a mean maximum sound level of 69.7 dB” (Garcia, 2012).

Perhaps most interestingly, the researchers broke down the sources of noise into categories: “Staff conversation (65%), roommates (54%), alarms (42%), intercoms (39%), and pagers (38%) were the most common sources of noise disruption reported by patients” (Garcia, 2012). “Despite the importance of sleep for recovery, hospital noise may put patients at risk for sleep loss and its associated negative effects,” they wrote. In addition, researchers found that the intensive care and surgical wards had some work to do in dampening noise levels, with ICU peaking at 67 dB and 42 dB for surgical areas. Both far exceeded WHO’s 30 dB patient room recommendation (Garcia, 2012).

Besides patient sleep deprivation, which itself can lead to a multitude of health problems including high blood sugar, high blood pressure and fatigue, studies have reported that elevated noise levels can increase heart and respiratory rates, blood pressure and cortisol levels. Recovery room noise causes patients to request more pain medication, and preterm infants “are at increased risk for hearing loss, abnormal brain and sensory development, and speech and language problems when exposed to prolonged and excessive noise” (Deardorff, 2011).

There is still more research to be done, of course, but Yoder and his colleagues had good news, as well; much of the hospital noise they identified is modifiable, suggesting that hospitals can take steps to successfully create a quieter environment for both patients and healthcare providers (Garcia, 2012).

Around the country, "quiet campaigns" have been launched by hospitals in an attempt to dampen nighttime noise. Besides dimming lights and asking staff to keep their voices down at night, they are working to eliminate overhead paging systems, replace wall and/or floor coverings – even the clang of metal trashcans. Northwestern's Prentice Women's Hospital in Chicago was built with noise reduction in mind, replacing the idea of centralized nursing stations with the advent of smaller, multiple stations (Deardorff, 2011)

Billed as "one of the nation's largest hospital construction projects," Palomar Medical Center in North San Diego County is a state-of-the-art facility that has been designed "to encourage quietness," according to Tina Pope, Palomar Health Service Excellence Manager. Slated to open its doors this August, the hospital will feature a new nursing call system to route calls directly to staff and help eliminate the need for overhead paging, de-centralized nursing stations and clear sig lines, allowing staff to check on patients without having to leave unit doors open. With measures already in place including "Quiet Hospital" badges on staff and posters at the entrance of every unit, a "Quiet at Night" campaign (9 p.m. – 6 a.m.), and a "Quiet Champions" program that encourages staff to report noise problems, Palomar is one of a growing number of hospitals working toward a new era of quiet.

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## Noises Are Truly Horrible For People Who Have PTSD

20 Mar '2018 [Sound](#)

Noise is a really big issue for PTSD survivors: people who have mental health problems because of their traumas. How are they connected?

Almost everybody has experienced a trauma. But some traumas are more scarring than others and can even result in long-lasting mental disorders like **PTSD**, which can have an extreme impact on someone's life. It's a disorder that can develop in the brain after a horrifying experience, like war or a car crash.

### Symptoms

The symptoms of PTSD are, to say the least, not pleasant. They range from nightmares about the traumatic events, disturbing thoughts and feelings, anxiety, trying to avoid anything that has something to do with the traumatic event, and an increase in the fight-or-flight response.

Around ten percent of the population suffers from PTSD, according to data from **NCBI**, a part of the US National Library of Medicine. And, remarkably enough, that percentage is the same for people who suffer from tinnitus (the sound of a constant beep in your ears). The NCBI clearly sees a link between the two.

PTSD survivors also suffer from the Exaggerated Startle Syndrome, with anxiety and actions in an extreme and irrational way too loud noises and bangs. And then there are the sounds that remind them of the sounds during the traumatic events, which can trigger memories of the





## Fear

PTSD can also cause a general fear of sounds: phonophobia, or a fear of some specific sounds: misophonia. Survivors of the disorder also are generally much more sensitive to sounds and perceive them as much louder than other people would.

All of this makes the life of people with PTSD very hard. If you think you are suffering from this, consult your doctor. Really, please do it. For yourself, and for the ones you love.

Do you have PTSD and would you like to tell your experiences to us? We are always very open and interested to hear what you have to say. And again: if you haven't done it yet, visit your doctor, please. Thank you!

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Front Psychol. 2013; 4: 578.

PMCID: PMC3757288

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PMID: [24009598](https://pubmed.ncbi.nlm.nih.gov/24009598/)

## Does noise affect learning? A short review on noise effects on cognitive performance in children

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### Abstract

The present paper provides an overview of research concerning both acute and chronic effects of exposure to noise on children's cognitive performance. Experimental studies addressing the impact of acute exposure showed negative effects on speech perception and listening comprehension. These effects are more pronounced in children as compared to adults. Children with language or attention disorders and second-language learners are still more impaired than age-matched controls. Noise-induced disruption was also found for non-auditory tasks, i.e., serial recall of visually presented lists and reading. The impact of chronic exposure to noise was examined in quasi-experimental studies. Indoor noise and reverberation in classroom settings were found to be associated with poorer performance of the children in verbal tasks. Regarding chronic exposure to aircraft noise, studies consistently found that high exposure is associated with lower reading performance. Even though the reported effects are usually small in magnitude, and confounding variables were not always sufficiently controlled, policy makers responsible for noise abatement should be aware of the potential impact of environmental noise on children's development.

**Keywords:** noise, cognitive performance, cognitive development, children, speech perception, listening comprehension, irrelevant sound effect, classroom acoustics



In everyday life, cognitive tasks are often performed in the presence of task-irrelevant environmental noise. Accordingly, numerous studies on noise effects on performance have been conducted since the middle of the 20th century (for reviews see Hellbrück and Liebl, 2007; Szalma and Hancock, 2011), showing that—depending on characteristics of sounds and tasks—noise of low to moderate intensity may in fact evoke substantial impairments in performance.

Most of these studies were conducted with adults. The present review, however, will focus on studies including children. Children are especially vulnerable to harmful effects of environmental noise, as cognitive functions are less automatized and thus more prone to disruption. We will report findings concerning effects of acute noise on performance in concurrent auditory and non-auditory tasks, as well as effects of chronic noise on children's cognitive development.

### Effects of acute noise on children's performance in auditory tasks

Psychoacoustic studies have consistently shown that children's speech perception is more impaired than adults' by unfavorable listening conditions. The ability to recognize speech under conditions of noise or noise combined with reverberation improves until the teenage years (Johnson, 2000; Wightman and Kistler, 2005; Talarico et al., 2007; Neuman et al., 2010). With stationary noise makers, signal-to-noise ratios (SNRs) have to be 5–7 dB higher for young children when compared to adults in order to achieve comparable levels of identification of speech or nonspeech signals, with adult-like performance reached at about 6 years of age (Schneider et al., 1989; Fallon et al., 2000; Werner, 2007). However, with maskers that vary over time, i.e., with trial-by-trial variation of the maskers' spectral composition (Oh et al., 2001; Hall et al., 2005; Leibold and Neff, 2007) or with fluctuating maskers such as single-talker speech (Wightman and Kistler, 2005), adult-like performance is usually not reached before the age of 10 years. Furthermore, children are less able than adults to make use of spectro-temporal and spatial cues for separation of signal and noise (Wightman et al., 2003; Hall et al., 2005). These findings demonstrate that children are especially prone to *informational* masking, i.e., masking that goes beyond energetic masking predicted by filter models of the auditory periphery.

Studies identified a range of linguistic and cognitive factors to be responsible for children's difficulties with speech perception in noise: concerning the former, children are less able than adults to use stored phonological knowledge to reconstruct degraded speech input. This holds for the level of individual phonemes, as children's phoneme categories are less well specified than adults' (Hazan and Barrett, 2000), but also for the lexical level since children's phonological word representations are more holistic and less segmented into phoneme units. Therefore the probability of successfully matching incomplete speech input with stored long-term representations is reduced (Nittrouer, 1996; Metsala, 1997; Mayo et al., 2003). In addition, young children are less able than older children and adults to make use of contextual cues to reconstruct noise-masked words presented in sentential context (Elliott, 1979). Concerning attention, children's immature auditory selective attention skills contribute to their difficulties with speech-in-noise perception. Children's susceptibility to informational masking has been attributed to deficits in focusing attention on auditory channels centered on signal frequencies, while ignoring nonsignal channels (Wightman and Kistler, 2005). Behavioral and ERP measures from dichotic listening paradigms provide evidence that auditory selective attention improves throughout entire childhood (Doyle, 1973; Pearson and Lane, 1991; Coch et al., 2005; Wightman et al., 2010; Gomes et al., 2012).

Owing to the mediating role of linguistic competence and selective attention, children with language or attention disorders are still more impaired than normally developing children by noise in speech perception tasks (Geffner et al., 1996; Ziegler et al., 2005, 2009). A stronger noise effect is also evident for children tested in their second language when compared to native children (Crandell and Smaldino,



# Autism & Anxiety: Parents seek help for extreme reaction to loud noise

September 5, 2018

*Our 12-year-old son has autism, mild intellectual disability and anxiety attacks so severe that we end up in the emergency room. Loud noises are the worst – for example the school fire alarm, thunderstorms, a balloon popping, fireworks. Any help would be greatly appreciated.*



*This week's "Got Questions?" answer is by Judy Reaven, a clinical psychologist and associate professor of psychiatry and pediatrics at the University of Colorado School of Medicine and Children's Hospital Colorado, in Denver. Dr. Reaven's conducted research on the effectiveness of cognitive-behavioral therapy for anxiety in adolescents with autism, with the support of an [Autism Speaks research grant](#).*

***Editor's note: The following information is not meant to diagnose or treat and should not take the place of personal consultation, as appropriate, with a qualified healthcare professional and/or behavioral therapist.***

Thanks for the great question. It certainly sounds like your family is experiencing a very difficult situation. Anxiety symptoms and reactions are very common in individuals with autism spectrum disorder (ASD). They can interfere with functioning across home, community and school settings.

Although your son's reaction sounds more severe than most, many people with autism struggle with a range of fears, phobias and worries. These can range from a debilitating fear of, say, spiders or the dark to chronic anxiety about making mistakes or being late.

Fortunately, recent research suggests that anxiety in children and adults who have autism is quite treatable. Often, these individuals are helped by the same or similar strategies that work well in treating anxiety in the general population.

These approaches include cognitive behavior therapy, or CBT. Cognitive-behavioral approaches are well-established, evidenced-based treatments that have become the gold standard of psychosocial treatments for anxiety. [My own research](#) and that of my colleagues has demonstrated the helpfulness of modifying cognitive-behavioral approaches to address the special needs of those who have autism.

Where to begin?

You describe a number of fears that may be related to sensory sensitivities. I recommend that you begin by consulting an occupational therapist who can assess whether your son's extreme sensitivities to noises are part of a broader sensory processing disorder. If this is the case, and if your son's fears are exclusively triggered by sensory stimuli, then his symptoms may be best addressed by a sensory-focused intervention. Many occupational therapists who specialize in autism receive special training in this area.

It's common for children with ASD and anxiety to become extremely frightened in response to sensory stimuli. Perhaps – like many individuals with autism – your son also has difficulty telling you what's scaring him. Instead, he may show his fear with extreme avoidance of a situation.

For example, he might refuse to go to school after a fire drill. He might become fearful of birthday parties after being frightened by a balloon that popped unexpectedly. Other signs of extreme distress can include yelling, crying, clinging and general agitation. Because your son may have difficulty communicating, it's important to observe his behavior for these signs of distress. This can help you determine what's triggering his fears.

#### Avoidance versus learning to cope

Many parents go to great pains to protect their children by avoiding agitating situations. This approach is sometimes appropriate and even necessary. However, it denies individuals the opportunity to learn how to manage anxiety-provoking situations on their own.

By helping your son learn to manage his fear, you can prepare him for an unpredictable world so that he can participate in it to the maximum extent possible.

Given the severity of your son's anxiety symptoms, I suggest that you seek professional support in addition to the strategies offered here. Families whose children have milder symptoms of anxiety can try these strategies on their own – seeking professional help if symptoms worsen.

#### Tackling one fear at a time

I suggest making a list of your child's major fears and worries. Try to rank order them from mild to severe. To encourage success, I'd start with a mild-to-moderate fear before taking on his extreme reaction to loud noises.

Key components of a cognitive behavioral approach include introducing coping strategies such as deep breathing and "helpful thoughts" that can help a person manage fearful reactions.

For example, you can teach your son to take deep slow breaths to help manage his body's physical anxiety reactions.

"Helpful thoughts" are statements that your son can say to himself when faced with a situation that makes him anxious. For example, you can coach to your son to say, "This is a loud noise. I don't like it, but I can handle it."

To help your son to learn these strategies, I suggest you model taking deep breaths while repeating a "helpful thought" out loud.

#### Graded exposure

The most important step is to help your son face his fears a little at a time. We call this "graded exposure." For example, explain to your son that the two of you are going to listen to a recording of thunder. The first time, you might play the recording at a soft volume, then gradually increase the volume over time as he demonstrates increased comfort with the sounds.

Or you might try watching a video of a balloon pop – perhaps with the volume off the first time. Then he can watch a real balloon pop while standing some distance away. Over time, he can move closer and closer to the balloon.

After such exercises, you can present him with small rewards for being brave and "facing fears." Remember that even a small act of bravery – such as listening to a recording of thunder for 10 seconds – represents an important step toward handling fears. It deserves to be acknowledged.

Although graded exposure may seem counterintuitive, [research](#) indicates that this strategy is the single most effective strategy for getting over a particular fear.

I wish you and your son the very best. Please let us know how you're doing with an email to [GotQuestions@autismspeaks.org](mailto:GotQuestions@autismspeaks.org).

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## Additional Resources & Tools

#### EXPERT OPINION

[Help for Child with  
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#### EXPERT OPINION

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I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

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I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

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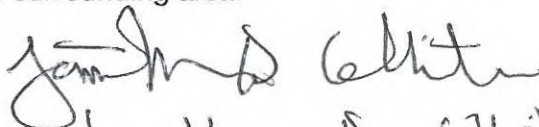
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I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE



PRINTED NAME

Jonathan D. White

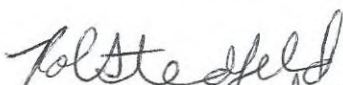
ADDRESS

485 Madelaine Dr

EMAIL

jondwhite418@gmail.com

SIGNATURE



PRINTED NAME

Robin Stedfeld

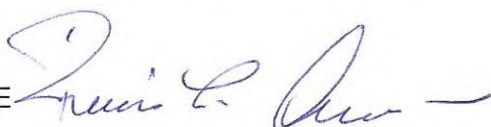
ADDRESS

485 Madelaine Dr. LaGrande

EMAIL

rstedfeld@yahoo.com

SIGNATURE



PRINTED NAME

RONNIE L. ALLEN 541-963-7720

ADDRESS

410 Balsa Street LA GRANDE, OREGON 97850

EMAIL

N/A NONE:

SIGNATURE



PRINTED NAME

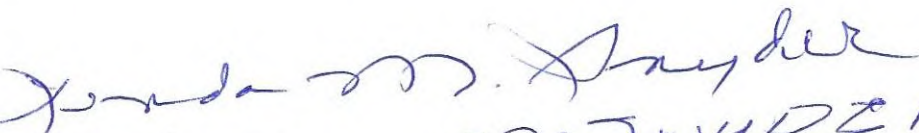
Rita Allen

ADDRESS

410 Balsa St. LaGrande Or.

EMAIL

SIGNATURE



PRINTED NAME

Linda M. SNYDER

ADDRESS

491 17704241R2

EMAIL



I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE *Robin J. Ostermann*

PRINTED NAME Robin J. Ostermann

ADDRESS 495 Modelaire Dr La Grande, OR 97850

EMAIL

SIGNATURE *Robert J. Ostermann*  
Robert J. Ostermann

PRINTED NAME

ADDRESS 495 Modelaire Dr. La Grande, OR 97850

EMAIL

SIGNATURE *John Yeates*

PRINTED NAME JOHN YEATES

ADDRESS 408 SUNSET DRIVE LA GRANDE, OR 97850

EMAIL jyeates52@gmail.com

SIGNATURE *Ruth Schumacher Yeates*

PRINTED NAME Ruth Schumacher Yeates

ADDRESS 408 Sunset Dr, La Grande

EMAIL ruthschumacheryeates@gmail.com

SIGNATURE *D. Dale Mammen*

PRINTED NAME D. Dale Mammen

ADDRESS 405 Balsa. La Grande, Or

EMAIL dmammen@comi.com

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SIGNATURE

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SIGNATURE *Damon Sexton*  
PRINTED NAME *Damon Sexton*  
ADDRESS *401 Balsa St La Grande, OR 97850*  
EMAIL *sexton.damon@gmail.com*

SIGNATURE *Coy Sexton*  
PRINTED NAME *Coy Sexton*  
ADDRESS *401 Balsa Street, La Grande, OR 97850*  
EMAIL *coytris@gmail.com*

SIGNATURE *Melinda McGowan*  
PRINTED NAME *Melinda McGowan*  
ADDRESS *602 Sunset Dr.*  
EMAIL *melindamegowan@gmail.com*

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL



I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE *Lois Barry*  
PRINTED NAME LOIS BARRY  
ADDRESS P.O. BOX 566, LA GRANDE, OR 97850  
EMAIL loisbarry31@gmail.com

SIGNATURE *Cathy Webb*  
PRINTED NAME CATHY WEBB  
ADDRESS 1700 Cedar St. LA GRANDE, OR 97850  
EMAIL thinkski@gmail.com

SIGNATURE *JoAnn Marlette*  
PRINTED NAME JOANN MARLETTE  
ADDRESS 2031 Court St. #8, Baker City, OR 97814  
EMAIL joannmarlette@yahoo.com

SIGNATURE *Keith D. Hudson*  
PRINTED NAME Keith D. Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL Keithdhudson@gmail.com

SIGNATURE *Laura Elly Hudson*  
PRINTED NAME Laura Elly Hudson  
ADDRESS 605 F Ave, La Grande OR 97850  
EMAIL ellyhudson@gmail.com

I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE *Lynn Wheeler Duncan*  
PRINTED NAME LYNN WHEELER DUNCAN  
ADDRESS 489 Modelaire Drive, LaGrande OR 97850  
EMAIL rlwd1910@gmail.com

SIGNATURE *Gary D. Pierson*  
PRINTED NAME Gary D. Pierson  
ADDRESS 489 Modelaire Drive, La Grande OR 97850  
EMAIL -

SIGNATURE *Anna G. Carinato*  
PRINTED NAME Anna G. Carinato  
ADDRESS 86 Hawthorne Dr. La Grande OR 97850  
EMAIL acavinat@ecu.edu

SIGNATURE *Joe Horst*  
PRINTED NAME JOE HORST  
ADDRESS 86 HAWTHORNE DR. LA GRANDE OR. 97850  
EMAIL joehorst@con.com

SIGNATURE *Angela Sherer*  
PRINTED NAME Angela Sherer  
ADDRESS 91 W. Hawthorne Dr La Grande, OR 97850  
EMAIL asherer@frontier.com

I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE

*Merle E Comfort*

PRINTED NAME

MERLE E COMFORT

ADDRESS

209 SWAPLO LA GRANDE OR 97850

EMAIL

merlecomfort@gmail.com

SIGNATURE

*Robin L. Maille*

PRINTED NAME

Robin Maille

ADDRESS

401 Cedar St., La Grande

EMAIL

rmaille@icloud.com

SIGNATURE

*Carol S. Summers*

PRINTED NAME

CAROL S. SUMMERS

ADDRESS

2811 Bekelen Lane La Grande, OR.

EMAIL

carolsummers1938@gmail.com

SIGNATURE

*Caroline Kaye Juniper*

PRINTED NAME

Caroline Kaye Juniper

ADDRESS

406 4th Street - LaGrande - OR 97850

EMAIL

SIGNATURE

*Gerald D. Juniper*

PRINTED NAME

Gerald Darwin Juniper

ADDRESS

406 4th St. LaGrande, OR. 97850

EMAIL



I have read the attached letter regarding noise and it expresses my concerns and my request to abandon the use of the proposed route for the Boardman to Hemingway Transmission Project and that it be rerouted to an area that is much less impactful to the residents of La Grande and to the surrounding area.

SIGNATURE *Robert J. Sherer*  
PRINTED NAME Robert J. Sherer  
ADDRESS 970 Hawthorne Dr, La Grande, OR 97850  
EMAIL asherer@frontier.com.

SIGNATURE *Heather M. Null*  
PRINTED NAME Heather M. Null  
ADDRESS 492 Madeleine Dr. La Grande, OR 97850  
EMAIL hnull@conl.com

SIGNATURE *Bert R. Freewing*  
PRINTED NAME Bert R. Freewing  
ADDRESS 709 South 12<sup>th</sup> Street La Grande, OR 97850  
EMAIL jeanfrewing@gmail.com

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

SIGNATURE  
PRINTED NAME  
ADDRESS  
EMAIL

## TARDAEWETHER Kellen \* ODOE

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**From:** Zoë Symon <zesymon@gmail.com>  
**Sent:** Saturday, June 22, 2019 5:16 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** B2H Comment

Hello,

I'm writing today to publicly comment on the Boardman to Hemingway Transmission Line Project. As a homeowner in La Grande, Oregon, as an avid outdoors person, and as someone who cares about my community and the environment, this project concerns me greatly.

I moved to the area a few years ago and fell in love with the beauty of this valley, the local environment, and the people here. Immediately, I knew that this was a special place and that I wanted to live here. We purchased a house last year, and shortly thereafter began hearing about this thing called B2H. I looked into it and was appalled by the blatant lack of care for the rural communities, livelihoods of people in those communities, as well as the environment.

This effort, with the tagline "Clean Today, Cleaner Tomorrow" is so out of touch that it would be funny if it weren't so scary for me, my community, and the things we care about. We live in a stunningly beautiful area of the country, and all proposed routes of the line would irreparably mar the landscape and the viewshed. Not to mention, the multiple proposed routes pit neighbor against neighbor in a "anywhere but my land" type of dispute. Well, I don't want it to go anywhere near my community. I live in La Grande, I recreate at Morgan Lake, and I spend time at friends' property on Glass Hill. There is nowhere acceptable for this line to go.

This is to say nothing of the fact that no effort that damages the landscape and the environment this much should reasonable be called "clean". When fragile ecosystems and landscapes are impacted by clearcutting and more, we lose any potential benefit those areas could have brought for recreation, conservation, hunting, bird watching, and more. I also have yet to even mention hydropower. Yes, I am aware that hydropower supplies much of the energy of the Northwest, but to call this form of energy "clean" or "green" is misleading and dangerously out-of-touch. Many conservationists agree that hydroelectric dams are irreparably damaging to the ecosystems up and downstream of them, changing the environment, habitat, and wildlife. More and more consumers are also waking up to this fact, which is hard to ignore as renewable energy resources such as wind and solar are becoming increasingly affordable and cheaper than other traditional means of generating energy.

Given all this, could the need be so great to overcome such terrible obstacles? I think not. This is a lazy proposal that will provide little to no benefit to the communities through which it passes, doing much more harm than good. The listed pros are vague and non-specific, doing little to outweigh the obvious cons, and just a little research puts what "pros" there are onto shaky ground.

If I could vote on this, I would vote NO on the B2H project entirely.

Sincerely,  
Zoë Symon

--

Zoë Symon



# Oregon Department of Energy and the Energy Facility Siting Council

Public Hearing on the Draft Proposed Order  
for the Boardman to Hemingway Transmission Line  
June 18-20 and June 26-27, 2019, 4:30-8 p.m.  
Public Written or Oral Testimony Registration

Name (mandatory) Thomas Thompson  
Mailing Address (mandatory) 2202 Gekelaw Lane  
La Grande, OR 97850  
Phone Number (optional) (541) 962-7778 Email Address (optional) thomasdalethompson@gmail.com  
Today's Date: 6/20/19

Do you wish to make oral public testimony at this Hearing: Yes ☒ No ☐

Written comments can also be submitted today.

All written comments must be received by the deadline, July 23, 2019, 5 p.m. PDT to:

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, OR 97301  
Fax: 503-378-6457  
Email: [B2H.DPOComments@oregon.gov](mailto:B2H.DPOComments@oregon.gov)

Note: by submitting written or oral testimony, you will receive a notice from the Oregon Department of Energy at a future date of the opportunity to request party status in a contested case hearing on the proposed facility.

## Written Testimony

(Please print legibly – Use the back for additional space if needed. Additional written comments may be attached to this card.)

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<p style="text-align: right;">Page 102</p> <p>1 We want you to consider the negative impact of 2 the project on the beautiful viewshed of the entire 3 La Grande valley and the entire route of this proposed 4 line throughout eastern Oregon. We want you to consider 5 the likely loss of property values that the viewshed 6 would bring with its massive towers that terribly impact 7 our enjoyment, our livelihood, our ability to bring in 8 tourists that provide very substantial amounts of money 9 to our community.</p> <p>10 And we would like you to consider the impact 11 of B2H on Ladd Marsh, its watershed, its refuge for 12 waterfowl, and wildlife, and its water quality.</p> <p>13 So we in Oregon Rural Action believe, and we 14 hope that you will come to agree with us, that Idaho 15 Power should abandon the B2H project and should instead 16 utilize the alternative sources of power that are 17 available to it.</p> <p>18 Thank you.</p> <p>19 HEARING OFFICER WEBSTER: Following 20 Mr. Thompson, we will hear from Norm Cimon.</p> <p>21 MR. THOMAS THOMPSON: Good evening. My name 22 is Thomas Thompson. My address is 2202 Gekeler Lane, 23 La Grande, Oregon. I'm a landowner in the Ladd Canyon 24 area along the existing 240-line that is the proposed 25 action of the current plan.</p>	<p style="text-align: right;">Page 104</p> <p>1 conifer forest. I managed grazing programs in the West, 2 the noxious weed programs in the West. If you don't 3 catch it right at the year or 2 years of knowing it's 4 coming with the right chemicals, the right seeded 5 grasses and follow-up, you are in trouble. And we are 6 in trouble on our land from those construction projects.</p> <p>7 What was different on the construction of the 8 existing line was, in the 1960s, was they used smaller 9 machines. They crawled over the land, they dug those 10 with pneumatic drills, much like the drills they used on 11 the dams, in rock bedrock, and a lot of those holes were 12 handset by pretty tough guys. When we replaced our 13 existing poles, by worker safety standards, they added 14 those lines into every replaced pole site to get their 15 poles in, set, and with bucket trucks to prepare the 16 H-braces and stuff like that.</p> <p>17 When I left, I left them with a terribly big 18 problem to deal with, and I'm losing with Ventenata 19 dubia. Please write that down, that grass.</p> <p>20 In talking to Land Services, the contractor 21 for Idaho Power, it was not on the radar. They didn't 22 hear that. The guy I talked to, I think they were 23 inobservant. They do have a noxious weed manager in the 24 city of Boise, but my gut feeling is their hands are 25 filled with -- their time is dominated with southern</p>
<p style="text-align: right;">Page 103</p> <p>1 I'm not naive enough to know, I think, that 2 both proposals will be approved, and I'm unclear on the 3 decision on either/or how that decision which route to 4 take. If the line is to be built, I support the Morgan 5 Lake alternative for the following reasons:</p> <p>6 My estimate is that it's shorter in its route, 7 and thus, by logic, less impact. It's located mostly 8 in, not all, but more in the proposed activity in a 9 mixed conifer forest where the moisture regimes are 10 higher. There is ability for lower seral vegetation to 11 re-establish, have to cut trees on. Hopefully most of 12 those will be native.</p> <p>13 My concern on the proposed, along the existing 14 240, is the noxious weeds. I've heard testimony on the 15 threat of wildfire, but noxious weed invasion is just as 16 threatening as wildfire to landowners, especially if 17 they raise cows. When that conversion from a native 18 bunch grass to an introduced annual grass, everybody 19 knows what cheatgrass and medusa are. There is a new 20 invader on the scene called Ventenata dubia. I don't 21 see that addressed in the boilerplate vegetation 22 management plan. We have been fighting it on the 23 existing 240 with the poles that were replaced from wood 24 and steel.</p> <p>25 So my fear is -- I'm retired from range and</p>	<p style="text-align: right;">Page 105</p> <p>1 Idaho issues.</p> <p>2 The reason I support the Morgan Lake 3 alternative over the existing 240 is it avoids Ladd 4 Marsh. It avoids more designated elk winterage, the 5 county map. It avoids the viewshed of La Grande I think 6 more. For the portions that are in the county, from La 7 Grande or from the southern valley, from the viewpoints 8 of Ladd Marsh, and for those reasons -- what really 9 worries me, these last 2 minutes, is I know the problems 10 of noxious weeds, and I'm working with Idaho Power to 11 get it done.</p> <p>12 But the mitigation plans, it's the landowner's 13 responsibility to determine that problem, design the 14 appropriate method to control it, monitor it to see if 15 it's working, and provide follow-up measures. They are 16 pretty much asking what do you need, if you can't do it, 17 get a contractor.</p> <p>18 Once the decision is made, when, if, how, what 19 does a landowner have other than legal recourse, if they 20 are not following the plan set or they are not providing 21 the expertise and the information, or the contractors 22 they sent out to help you don't know what they are 23 doing?</p> <p>24 So another issue I think with the landowners 25 is, once the power poles are in, right-of-ways are</p>

<p style="text-align: right;">Page 106</p> <p>1 established, and let's say they put access roads down 2 that right-of-way and use it. 3 In eastern Oregon, trespass elk hunting is a 4 big problem, and you want to lock your ground up so you 5 don't spread weeds or vandals. And some of these guys 6 are pretty ornery, to the point you need legal, just a 7 pack of sheriffs to deal with your problems, with a 8 person that is not going to cooperate if you ask them 9 nicely. 10 So I know OHV-ATV trails, they provide funding 11 for enforcement. I think there will have to be some 12 sort of follow-up in the mitigation plans to help 13 landowners to enforce the promises that Idaho Power 14 submits. 15 HEARING OFFICER WEBSTER: Before you leave, 16 can you repeat or spell the name of the invasive grass 17 that you -- 18 MR. THOMAS THOMPSON: Ventenata dubia. If 19 it's not an amoeba, if it's not in the vegetation 20 management plan, it wasn't site specific enough. Not 21 only the power line and poles, but the access roads. 22 HEARING OFFICER WEBSTER: Thank you. 23 MR. NORM CIMON: My name is Norm Cimon, 24 C-i-m-o-n. I live at 1208 First Street. I'm a systems 25 analyst. I'm retired but I still have my own company.</p>	<p style="text-align: right;">Page 108</p> <p>1 storage, smart meters, and smart inverters is reworking 2 the way that utilities participate in the marketplace. 3 The pace of that change will [only] accelerate..." 4 "The key points are as follows: 5 "Within 10 to 15 years much of the power on 6 the grid will come from widely distributed generating 7 sources. 8 "Many of these sources will be small to 9 moderately sized providers hosted through standalone 10 microgrids. 11 "Top-down control of those thousands of 12 emerging sources will no longer be viable." 13 You can't have tens of thousands of sources 14 managed the way we've been managing it. What we need is 15 something that looks a lot more like the Internet. That 16 is exactly what has been proposed by our research 17 organizations that are looking into this. 18 "The rules needed to provide robust management 19 for many of those sources will mimic those of the 20 Internet protocols which provide information from the 21 bottom up. 22 "Distributed generation will make the grid: 23 More reliable, more resilient, safer to operate." 24 That is all over the engineering journals. In 25 fact, large power grids tend to collapse, and there is</p>
<p style="text-align: right;">Page 107</p> <p>1 I have acted as a consultant for the Stop B2H group. 2 And I'm also a board member of the same organization 3 that Mr. Whitaker talked about, Oregon Rural Action. 4 I'd like to thank the Commission for making 5 their way to La Grande to listen to our concerns. And I 6 will be submitting a detail analysis of Exhibit H, the 7 geology and the soils. 8 I feel there is a weakness in the bonding, 9 that there is some substantial problems with the route 10 itself. I don't know that there is much choices. The 11 fact is that the bulk of the trail, or the route that 12 goes across the Blue Mountains goes right through severe 13 erosion potential. So I will be submitting all of that. 14 What I'd like to read into the record for the 15 future is something that I know a lot about, and I think 16 it's going to greatly impact the future. I think we 17 need to have this stuff in the record so that people can 18 look back, which is the age we are in now. We are 19 talking social media; we are talking the web. 20 Everything is public; there is no private stuff anymore. 21 The decisions are always going to be known, whatever 22 happens. 23 "An Overview: The electric grid, which has 24 remained in the same basic form for 100 years, is 25 changing very rapidly. The introduction of battery</p>	<p style="text-align: right;">Page 109</p> <p>1 no way to stop it. It's a huge argument going on in the 2 engineering community right now about just that. The 3 grid in a nutshell is chaotic. You cannot predict when 4 it's going to go down. Big stuff just makes it happen 5 more often and bigger. 6 "The paradigm shift will make much of the 7 high-voltage transmission system obsolete. 8 "That obsolescence will occur long before the 9 proposed 50 years of financing [for this project]. 10 "The proposed Boardman to Hemingway 500kV 11 power line is unneeded. Idaho Power's own data clearly 12 shows that the utility's electric demand has been flat" 13 [from 2007 to 2016]." 14 And that's because even with population growth 15 we are seeing efficiencies, we are seeing conservation, 16 and we are seeing renewables. So it's all changing 17 very, very quickly. 18 "The existing grid will be eclipsed by a 19 decentralized system. High-voltage, long-distance power 20 lines will be increasingly underutilized. Moreover, 21 such lines are inherently unstable and dangerous. They 22 are fire hazards in arid, semi-arid, and forested 23 environments -- the ecosystems along any proposed route 24 for the line in eastern Oregon." 25 Everything we have around us is fire prone.</p>



# Oregon Department of Energy and the Energy Facility Siting Council

Public Hearing on the Draft Proposed Order  
for the Boardman to Hemingway Transmission Line  
June 18-20 and June 26-27, 2019, 4:30-8 p.m.  
Public Written or Oral Testimony Registration

Name (mandatory) Thomas Thompson

Mailing Address (mandatory) 2202 Belkeler Lane  
LaGrande, OR

Phone Number (optional) 541-962-7788 Email Address (optional) thomasclethompson@gmail.com

Today's Date: 6/20/19

Do you wish to make oral public testimony at this Hearing: Yes X No     

Written comments can also be submitted today. with this form

All written comments must be received by the deadline, July 23, 2019, 5 p.m. PDT to:

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, OR 97301  
Fax: 503-378-6457  
Email: [B2H.DPOComments@oregon.gov](mailto:B2H.DPOComments@oregon.gov)

Note: by submitting written or oral testimony, you will receive a notice from the Oregon Department of Energy at a future date of the opportunity to request party status in a contested case hearing on the proposed facility.

## Written Testimony

(Please print legibly – Use the back for additional space if needed. Additional written comments may be attached to this card.)

my name is Thomas Thompson and I am a landowner  
along the proposed alternative (existing 240 line  
alternative). In review of the B2H alternative  
criteria and assuming both alternatives will  
be approved by the council, I support  
the Morgan Lake Alternative. For the



Following reasons:

- 1) It is the shortest thus reducing impacts
- 2) It is located in more conifer forest w/ higher moisture to help reduce noxious weed invasion most specifically the annual grass (*montenada debra*).
- 3) It avoids Ladd Marsh Wildlife Refuge.
- 4) Less landowners and perhaps less annually ~~for~~ landowners to negotiate easements with.
- 5) Avoids more county elk winter range
- 5) Avoids the City of La Grande viewshed and residence.
- 6) Avoids the viewshed of the Southern end of the Grand Rhonda Valley.

For these reasons, we support the Morgan Lake Alternative.



Melita Trent  
2325 17th St  
Baker City, OR 97814

RECEIVED

AUG 21 2019 PM 3 L



RECEIVED

AUG 21 2019

Kellen Trent  
Senior Siting Analyst  
Department of Energy

Oregon Department of Energy  
550 Capitol St. NE  
Salem, Oregon 97301

01-374299



August 19, 2019

Kellen Tardaewether, Senior Siting Analyst

Oregon Department of Energy

550 Capitol St. NE

Salem, Oregon 97301

email: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

## B2H EFSC Exhibit K APPLICANT FAILED TO INCLUDE ALL EFU LANDS FOR PURPOSES OF 215.275 ANALYSIS

### Exhibit K, 4.1.1.4 Non-EFU Alternatives

Idaho Power failed to include all farm land in the analysis required by ORS 215.275. Of critical concern are items (4) requiring restoration of agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility.

And (5) requiring that there be clear and objective conditions on the application for utility facility siting to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.

Idaho Power's analysis failed to include lands zoned as a combination of rangeland and farm use as farm land subject to the provisions of ORS 215.275

The failure to include all required land in the analysis results in a lack of compliance with the requirements of OAR 345-021-0010(l)(k) and OAR 345-022-0030. Due to this omission, the council cannot find the developer in compliance with ORS 469.504 or ORS 197.646 or OAR 345-022-0030.

The applicant states, "Several of the agricultural areas in the project area are zoned a combination of rangeland and farm use. Based on discussions with DLCD, IPC did not consider such hybrid zoned lands to be EFU lands for purposes of the ORS 215.278 analysis." This statement is not DOCUMENTATION as required for the application to be complete. There is no indication of who spoke with whom on what date, and nothing to document that the action actually occurred. Following is documentation taken directly from the LCDC rules that the combination zones are EFU and are required to be included in the ORS 215.278 analysis as well as the dictionary, IRS and FDA definitions of farm use which are consistent with the LCDC definition.

LCDC defines Exclusive Farm Use Zone in ORS 215.203(2)(a) as "farm use" means **the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof.----**"



Oxford Dictionary defines "farming" as "The activity or business of growing crops and raising livestock"

The Internal Revenue Service defines "farm" as "includes stock, dairy, poultry, fruit, furbearing animal, and truck farms, plantations, ranches, nurseries, ranges, greenhouses or other similar structures used primarily for the raising of agricultural or horticultural commodities, and orchards and woodlands."

The FDA defines "farm" as "an establishment under one ownership in one general physical location devoted to the growing and harvesting of crops, the raising of animals (or seafood), or both"

A failure to include all farm land in completing the requirements of ORS 215.275 means the applicant is not in compliance with OAR 345-022-0030 which is required in order to issue a site certificate or determine whether or not the application meets the standards. This understatement of farm lands is especially problematic due to the decision *Friends of Parrett Mountain v. Northwest Natural Gas Co.*, 336. iOr. 93, 108 (2003) requiring the determination to be "reasonable" meaning fair proper, just, moderate or suitable under the circumstances". This transmission line is being sited on a far greater percentage of agricultural private land in counties where the public land includes a much greater percent of the total lands in the counties. The omission of most agricultural lands from the 215.275 analysis also means that the stated percentage of total farm lands being taken from the counties is significantly understated.

Name: Moira Trent

Signature:



Address: 2325 17<sup>th</sup> Street, Baker City, OR 97814-2951

## TARDAEWETHER Kellen \* ODOE

---

**From:** C Troch <ctrochlell@gmail.com>  
**Sent:** Sunday, August 18, 2019 4:11 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** B2H comments

Oregon Energy Facility Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E  
Salem, OR 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project (B2H)  
9/28/2018; Draft Proposed Order 5/23/2019.

Dear Chair Beyeler and Members of the Council:

This letter is a public comment for the above referenced project. Specifically, this letter will discuss Idaho Power's compliance with Standard 345-022-0110 - Public Services, in Exhibit U (3.5.6.2 and 3.5.6.5) of the EFSC application for B2H to ODOE. The letter will discuss the impact potential wildfires caused by the B2H transmission line will have on the ability of public and private providers within the analysis area to provide fire protection.

The effect of transmission lines on wildfire impact in western states has been well documented. In California, PG&E lines have caused 5 of the 10 most destructive fires since 2015, producing a liability of over 30 billion dollars for PG&E. When considering the impact of B2H's operation, residents of Union County find the similarities between La Grande and Paradise California, where the infamous Camp Fire struck in 2018, deeply concerning. La Grande and Paradise share similar elevations and populations, however, La Grande has several characteristics that make it significantly more vulnerable to the ravages of wildfire than Paradise. For instance, La Grande averages 18 inches of rain yearly while Paradise enjoys 55 inches. Additionally, the proposed line runs adjacent to La Grande, while the line causing the Camp Fire was 7 miles from Paradise. Oregon's 2006 Communities at Risk Assessment by the Oregon Department of Forestry cites a startling fact: The fire risk of the wildland urban interface (WUI) in La Grande has been rated the #1 WUI fire risk in Oregon!

There is no doubt that construction of the proposed B2H transmission line would significantly increase the risk of wildfire in our area. From Idaho Power's own Draft Protection Order (Exhibit U-3.5.6.2, p. U-24): "Most activities will occur during summer when the weather is hot and dry. Much of the proposed construction will occur in grassland and shrub-dominated landscapes where the potential for naturally occurring fire is high. Project construction-related activities, including the use of vehicles, chainsaws, and other motorized equipment, will likely increase this potential risk in some areas within the Site Boundary. Fire hazards can also be related to workers smoking, refueling, and operating vehicles and other equipment off roadways. Welding on broken construction equipment could also potentially result in the combustion of native materials near the welding site." Idaho Power recognizes this hazard but makes no consideration of it in its application.

There are several specifics to examine in an analysis of the proposed B2H line's effects on Union County's ability to provide fire protection services. Firstly, firefighting crews in our region are limited and staffed by volunteers. In their application, Idaho Power avers, "Most of the fire districts within the analysis area comprise volunteers, and in some cases, it takes considerable time to collect and mobilize an entire fire crew." As well, JB Brock, Union County emergency

Manager states in Idaho Power's application "volunteer fire departments (rural fire protection districts) have a hard time finding volunteers due to budget constraints, similarly to budget constraints at the state and federal level. The wildland fires are getting bigger and cost more to fight" (U-1C-6). Fire crews in Union County are not equipped to handle potential wildfires generated by the proposed B2H transmission line.

The fact that fire crews are unstable, small and volunteer affects many aspects of their ability to respond to wildfires. Delayed response times, as noted in the quote from the previous paragraph, is one effect. Estimates of response time in the EFSC application are best-case scenarios. The estimate of 4 to 8 minutes as the response time in Union County (Table U-10) is far from even a best-case scenario (p. U-17). Residents that live on Morgan Lake Road concur that driving time is at least 10-15 minutes to the most accessible areas of the line from the base of Morgan Lake Road. Add to this estimate travel time from the La Grande Fire Station (approximately 7 minutes) and the time needed for individual fire fighters to travel to the Fire Station for a more realistic best-case scenario response time of over 22 minutes. If land owners are driving their livestock down the road, then no one can proceed until they are done. Remember - the Paradise Camp Fire burned at a rate of over 1 acre per second!

Another factor is the complications to firefighting introduced by the transmission lines themselves. According to Marvin Vetter, ODOF's Rangeland Coordinator, "local crews have no training in this scenario and will wait for the lines to be de-energized." JB Brock, Union County Emergency Manager, states, "The project (transmission line) could limit the ability on initial attack if fire fighters have to wait for power lines to be de-energized." (U-1C-6)

These delays allow fires to grow even more and in the meantime homes may be lost and people may die. There is only one road in and out of this area.

Our community, struggling to maintain volunteer fire crews cannot possibly hope to address the overwhelming additional challenges and risks imposed by a giant project such as the B2H transmission line!! This is not addressed in Idaho Power's application and Idaho Power cannot therefore conclude that the proposed B2H transmission line is "not expected to have significant adverse impacts on fire protection services" (Exhibit U 3.5.6.2)! Considering the current capacities of fire protection services in Union County and the additional risks of wildfire imposed by the B2H transmission line, I urge you to act in accordance with state statute OAR 345-022-0110 and reject Idaho Power's application to construct the Boardman to Hemingway transmission line. In fact, I invite you to come visit our community and see for yourself this area which has only one poorly maintained county road. Please come see how this project will threaten people's lives in so many ways for a system that will not benefit anyone in the area and may in fact be obsolete by the time it is built.

Sincerely,

Cathy Trochlell  
2409 E N Ave.  
La Grande, OR 97850



## ESTERSON Sarah \* ODOE

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**From:** David Trochlell <dtrochlell@gmail.com>  
**Sent:** Tuesday, August 20, 2019 5:14 PM  
**To:** B2H DPOComments \* ODOE  
**Subject:** Subject: B2H comments

Oregon Energy Facility Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St. N.E  
Salem, OR 97301

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project (B2H)  
9/28/2018; Draft Proposed Order 5/23/2019.

Dear Chair Beyeler and Members of the Council:

This is a public comment on the above referenced project. Specifically, it addresses Idaho Power Company's (IPC) compliance with Standard 345-022-0110 - Public Services, in Exhibit U (3.5.6.2 and 3.5.6.5) of the EFSC application for B2H to ODOE. My focus is on the potential impact that wildfires caused by the B2H transmission line may have and the inadequacy of fire protection within the analysis area.

The effect of transmission lines on wildfire impact in western states has been well documented. In California, PG&E lines have caused five of the ten most-destructive fires since 2015, producing a liability of over 30 billion dollars for PG&E. When considering the impact of B2H's operation, residents of Union County find the similarities between La Grande and Paradise California - where the infamous Camp Fire raged in 2018 - deeply concerning. La Grande and Paradise share similar elevations and populations, however, La Grande has several characteristics that make it significantly more vulnerable to the ravages of wildfire than Paradise. For one, La Grande's climate is much drier than Paradise's: annual precipitation here averages 18 inches, whereas Paradise, California receives about 55 inches of precipitation. Additionally, the proposed line runs adjacent to the city of La Grande, but the line that caused the devastating Camp Fire was seven miles from Paradise. Oregon's 2006 Communities at Risk Assessment by the Oregon Department of Forestry cites a startling fact: **The fire risk of the wildland urban interface (WUI) in La Grande has been ranked as #1 (highest risk) in Oregon.**

There is no doubt that construction of the proposed B2H transmission line would significantly increase the risk of wildfire in our area. From IPC's own Draft Protection Order (Exhibit U-3.5.6.2, p. U-24): "Most activities will occur during summer when the weather is hot and dry. Much of the proposed construction will occur in grassland and shrub-dominated landscapes where the potential for naturally occurring fire is high. Project construction-related activities, including the use of vehicles, chainsaws, and other motorized equipment, will likely increase this potential risk in some areas within the Site Boundary. Fire hazards can also be related to workers smoking, refueling, and operating vehicles and other equipment off roadways. Welding on broken construction equipment could also potentially result in the combustion of native materials near the welding site." **Idaho Power recognizes this hazard, but makes no consideration of it in its application. That is appallingly irresponsible!**

There are several specifics to examine in an analysis of the proposed B2H line's effects on Union County's ability to provide fire protection services. Firefighting crews in our region are limited and are staffed by volunteers. In their application, IPC states: "Most of the fire districts within the analysis area comprise volunteers, and in some cases, it takes considerable time to collect and mobilize an entire fire crew." JB Brock, Union County Emergency Manager, mentions in IPC's application: "volunteer fire departments (rural fire protection districts) have a hard time finding

volunteers due to budget constraints, similarly to budget constraints at the state and federal level. The wildland fires are getting bigger and cost more to fight” (U-1C-6). **The plain truth is this: fire crews in Union County are not adequately equipped to control a potential wildfire generated by the proposed B2H transmission line.**

The fact that fire crews are unstable, small, and consist of volunteers affects many aspects of their ability to respond to wildfires. Delayed response times, as noted in the quote from the previous paragraph, is one effect. Estimates of response time in the EFSC application are unrealistic, best-case scenarios. The estimate of four to eight minutes as the response time in Union County (Table U-10) is far from even a best-case scenario (p. U-17). Residents who live on Morgan Lake Road concur that driving time is at least 10-15 minutes to the most accessible areas of the line from the base of Morgan Lake Road. Added to this estimated travel time from the La Grande Fire Station (approximately seven minutes) would be the time required for individual volunteer firefighters to travel to the fire station and you have a much more realistic best-case scenario response time of over 22 minutes. If a rancher is driving livestock down Morgan Lake Road, then nobody can proceed up or down this road to escape a fire until the livestock are moved off the road. Given our problematically slow response time to fires, it is more than a little frightening to remember that California's Camp Fire burned at a rate of over one acre per second!

Another factor is the complications to firefighting introduced by the transmission lines themselves. According to Marvin Vetter, ODF's Rangeland Coordinator, “local crews have no training in this scenario and will wait for the lines to be de-energized.” JB Brock, Union County Emergency Manager, agrees: “The project (transmission line) could limit the ability on initial attack if firefighters have to wait for power lines to be de-energized.” (U-1C-6). Any delay such as this suggests could be deadly. Homes may be lost and people may die. Please remember: **There is only one narrow, steep, and winding road (Morgan Lake Road) in and out of the local project area.**

Our community, which struggles to maintain volunteer fire crews, cannot possibly hope to respond to the overwhelming additional challenges and risks imposed by a giant project such as the B2H transmission line. This is not addressed in IPC's application, so therefore it is ridiculously short-sighted when the IPC concludes that the proposed B2H transmission line is “not expected to have significant adverse impacts on fire protection services” (Exhibit U 3.5.6.2). Considering the current capacities of fire protection services in Union County and the additional risks of wildfire imposed by the B2H transmission line, I urge you to act in accordance with state statute OAR 345-022-0110 and **please reject Idaho Power Company's application to construct the Boardman to Hemingway transmission line.** In fact, I invite you to come visit our community and see for yourself that access to the project area is extremely poor, and that allowing this transmission line to operate would be frighteningly dangerous to our community and would needlessly place our lives at risk.

Sincerely,  
Dave Trochlell  
2409 E N Ave.  
La Grande, OR 97850



# Oregon Department of Energy and the Energy Facility Siting Council

Public Hearing on the Draft Proposed Order  
for the Boardman to Hemingway Transmission Line  
June 18-20 and June 26-27, 2019, 4:30-8 p.m.  
Public Written or Oral Testimony Registration

Name (mandatory) ARNOLD F. TROPE

Mailing Address (mandatory) Box 181 Adrian OR 97901

Phone Number (optional) (541) 372-5540 Email Address (optional) \_\_\_\_\_

Today's Date: 6/19/19

Do you wish to make oral public testimony at this Hearing: Yes ☒ No ☐

Written comments can also be submitted today.

All written comments must be received by the deadline, July 23, 2019, 5 p.m. PDT to:

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, OR 97301  
Fax: 503-378-6457  
Email: [B2H.DPOComments@oregon.gov](mailto:B2H.DPOComments@oregon.gov)

Note: by submitting written or oral testimony, you will receive a notice from the Oregon Department of Energy at a future date of the opportunity to request party status in a contested case hearing on the proposed facility.

## Written Testimony

(Please print legibly – Use the back for additional space if needed. Additional written comments may be attached to this card.)

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<p style="text-align: right;">Page 46</p> <p>1 crossing the Owyhee River going through me. The Owyhee 2 River, in my eyes and pretty much anybody that lives 3 around there in that area, is wild and scenic, ladies 4 and gentlemen. We have deer and we have turkeys, wild 5 turkeys and pheasants, quail, all of that, just like 6 they do up the river. But we have people making their 7 livings and taking care of their -- pay their taxes and 8 things as well. 9 And so that's my concern of crossing over our 10 ground on the Owyhee. 11 VICE CHAIRMAN JENKINS: Ms. Webster, may I ask 12 a question of Mr. Foss? 13 HEARING OFFICER WEBSTER: You may. 14 VICE CHAIRMAN JENKINS: The first three 15 speakers that we had, Roger Findley, Gary Pearson, and 16 Jay Chamberlin, talked about crossing agricultural land 17 in the Adrian area. Is this your land that they were 18 referring to? 19 MR. JIM FOSS: This is a Nyssa address, but it 20 is, I'm assuming -- and that's all I can do -- I believe 21 it's coming across over the hill, and we live on the 22 Idaho side of the Snake River but we're in Oregon. So 23 it's not there in Adrian; it's a Nyssa address. It's 24 Rock Springs Road and Owyhee Avenue, which goes to the 25 dam, right up the Owyhee River.</p>	<p style="text-align: right;">Page 48</p> <p>1 today, and I've heard quite a bit about it, and there's 2 been quite of bit of friction about it. 3 And looking at this map where the line is 4 supposedly going to cross, it looks to me like on 5 Cline's Hill, around Cline's Hill there east of Harper; 6 am I right? Am I correct? 7 HEARING OFFICER WEBSTER: I can't answer the 8 question. 9 MR. ARNOLD TROPF: Well, anyway, where it 10 crosses 20/26 there between Vale and Harper. 11 I've been wondering why they can't just 12 completely eliminate going into farm ground. Going 13 south with the line, going pretty close to the mouth of 14 the Owyhee Canyon, cross the canyon, go over toward, 15 what, Blackjack Mountain and go over and hit that Glen 16 Bridger transmission line and use the right of way right 17 there and follow that transmission line right toward 18 Murphy, and then drop down into Murphy. Why can't they 19 do that rather than even to come close to this farm 20 ground? 21 And I heard that they had restrictions there. 22 They've got restrictions for ATVs and stuff. What's 23 more important? We've got to get what's most important 24 here figured out. 25 And it looks to me like they can bring that</p>
<p style="text-align: right;">Page 47</p> <p>1 VICE CHAIRMAN JENKINS: But where this pivot 2 is? 3 MR. JIM FOSS: Where the pivot is, yes. It's 4 crossing quite a bit of private ground or different 5 private ground owners there, two, maybe three. I'm not 6 real sure. I'm one of them where they've dog-legged the 7 thing down in here and then come across this versus the 8 alternate route that they have to go stay out on the 9 BLM. If I'm understanding the maps right. 10 VICE CHAIRMAN JENKINS: Thank you. 11 HEARING OFFICER WEBSTER: Thank you. 12 MR. JIM FOSS: You're welcome. 13 HEARING OFFICER WEBSTER: Just a reminder, if 14 there's anybody who hasn't filled out a green form that 15 does want to give public comment tonight, please fill it 16 out. 17 Following Mr. Tropf we will hear from Timothy, 18 I think is it Froesch or Froesch? 19 MR. TIMOTHY FROESCH: Yes. 20 HEARING OFFICER WEBSTER: Mr. Tropf, if you 21 could, provide your name and address, please. 22 MR. ARNOLD TROPF: Yes. I'm Arnold Tropf. I 23 live at 404 Main Street, Adrian, Oregon. 24 I would like to thank you for including me in 25 this oral discussion. I just heard about this meeting</p>	<p style="text-align: right;">Page 49</p> <p>1 line down through there west of Mitchell Butte and Chalk 2 Butte and go across the mouth of the canyon there where 3 the siphon goes across and go south and hit the Glen 4 Bridger transmission line, follow that Glen Bridger line 5 right over into Idaho and drop right down into Murphy. 6 Now, it sounds to me like that's a no-brainer. 7 So I think we better get our maps out and 8 study things because this doesn't make sense to even 9 have to come into farm ground and have a problem with 10 litigation. 11 HEARING OFFICER WEBSTER: And I will just 12 refer us back to what Ms. Tardaewether said at the 13 outset, which is that the EFSC is not talking about 14 reconfiguring at this point; it was the application came 15 forward with the sites for the transmission lines. And 16 the EFSC's job is pretty much a thumbs up/thumbs down on 17 the route that has been provided. 18 MR. ARNOLD TROPF: So it's all cut and dried 19 then on where you're going to put this line? 20 HEARING OFFICER WEBSTER: There is a proposal 21 for a line that the EFSC will either approve or not 22 approve. 23 MR. ARNOLD TROPF: So that's all I got to say, 24 but it sounds to me like they done the figuring wrong 25 when they lined this thing out.</p>

<p style="text-align: right;">Page 50</p> <p>1 HEARING OFFICER WEBSTER: Thank you for your 2 comment. Thanks. 3 Next we'll hear from Mr. -- I can't tell if 4 it's a "P" or an "F." Is it Froesch or Proesch? 5 Following Mr. Proesch we will hear from JoAnn 6 Marlette. 7 MR. TIMOTHY PROESCH: My name is Timothy 8 Proesch. I live at 2104 Lake Owyhee Road, which is a 9 Nyssa address also but closer to Adrian, as the Fosses 10 as well. So if you guys, you've been on your map and 11 looked at section 13 and tower 255/4. So I purchased 12 this property in November of last year. This was just 13 brought to my attention not even 2 weeks ago that you 14 guys have proposed to the previous owner that you guys 15 had an agreement with them to survey this land to put 16 this in. So if you look at this section 13, not only 17 are you guys putting a tower on my proposed new home 18 site, you guys are also wanting to use an existing road 19 that I use to access my irrigation for the whole 20 property, which is 113.7 acres. 21 Nobody from Idaho Power, nobody from Oregon 22 Department of Energy has contacted me. The last time 23 there was even a title search done on this property, 24 knowing it was on the market, was May of last year. So 25 we're looking at year and a half that you guys haven't</p>	<p style="text-align: right;">Page 52</p> <p>1 continued property search and title search on these 2 properties that impact private land, I think is kind of 3 an oversight that needs to be addressed. Because now 4 here I am owning this property for almost a year now and 5 not been contacted whatsoever regarding this, but yet, 6 your proposed site runs right on my property, and then 7 your lines are going to drape from my property and my 8 new proposed home site across that pivot that Mr. Foss 9 discussed previously. 10 So I mean, I haven't seen another map; I just 11 have the map that was presented to me by Idaho Power 12 yesterday. I talked to a representative from Idaho 13 Power yesterday, who came to my house, who showed me the 14 detailed map. And I haven't even seen whatever, the 15 other map you guys are talking about, Double Mountain. 16 So I don't even know how close that infringes on my 17 property. 18 But to have this just being brought to light 19 and you guys want to move forward with this project, is 20 kind of devastating to me, especially for the amount of 21 property that I purchased and for the price I purchased 22 it for, there's a reason I purchased this property away 23 from everything and everybody; not to be impeded on by 24 anybody else, especially a big corporation. 25 I feel kind of bullied into this whole thing.</p>
<p style="text-align: right;">Page 51</p> <p>1 done any due diligence to continue to see, knowing this 2 property was on the market. And now I feel like I'm 3 being forced into allowing this to transpire because 4 this is your guys' proposed route. 5 So I am not obligated to continue to follow 6 the contractual agreement that you guys had with the 7 previous owner for the surveying of this land. I 8 purchased this property outright from the previous 9 owner; there's no bank loan or anything on this 10 property. 11 And so I have come ill-prepared for this 12 meeting because I just found out about this, and I have 13 not been contacted by anybody; not Idaho Power, like I 14 said, not Oregon Department of Energy, nobody. This was 15 brought to light to me by my neighbors. They said, Do 16 you know about this? I said, No, absolutely not, nobody 17 has contacted me whatsoever regarding this issue. But 18 yet, the proposed route runs right through my property 19 with the tower and an access road which is going to take 20 up a huge chunk of my land. 21 So there's several issues that I am going to 22 bring to your guys' attention in my formal written to 23 you guys because, like I said, this was just brought to 24 my attention. But to have this not discussed with me 25 through any kind of proper channels and not doing a</p>	<p style="text-align: right;">Page 53</p> <p>1 And talking with Idaho Power, we talked about the 2 eminent domain also, which I don't feel like is fair to 3 somebody who's a private landowner. Especially I 4 shouldn't have to follow a contractual agreement you 5 guys had with somebody else just for the survey of the 6 property. Here it is impeding clear through my 7 property, and it's impacting my neighbors and everybody 8 around me. 9 I have future plans for development for this 10 land, not just to have Idaho Power take up the majority 11 of my land. Like I said, if you zoom in on this, you 12 guys are taking up a huge chunk of my property. The 13 biggest chunk of my property that I have, which is like 14 88.8 acres, you guys are going to drive right through 15 the middle of it to access your guys' tower and then 16 your tower is going to be on my property, on my new 17 proposed home site that I've been planning since I 18 bought this property a year ago. 19 And to just have this brought to me, it wasn't 20 even brought to me through the proper channels, it was a 21 concerned neighbor that was concerned because he knew my 22 future plans and knew what I had done and how much money 23 and how much capital I have invested in doing this. 24 This is my life savings. Yes, I'm younger than most of 25 these people that are speaking out about this, but it's</p>

<p style="text-align: right;">Page 66</p> <p>1 interaction with him. And one of the engineers out of 2 our department went out there yesterday and met with 3 him, just dropped everything. He had gone and went out 4 there, took a look at it. At this point, I don't know 5 that there's anything we can do that would change 6 things. We're going to have to look at things a little 7 bit more.</p> <p>8 We have continued to work with a lot of 9 different landowners on various micrositing issues here 10 or there in trying to resolve issues ahead of time where 11 we can. So that's kind of where we're at with this 12 right now.</p> <p>13 Mr. Proesch, as he indicated, just fairly 14 recently bought that parcel of property. We had over 15 the course of the last year, we had hired a title 16 company to go out and do title searches. We got that 17 information back certainly no more than 6 months ago. 18 And in fact, when the title company did the title 19 search, Mr. Proesch had not yet purchased that land; it 20 was a previous landowner's name who came back on the 21 results of the title search. So that's basically where 22 that's at.</p> <p>23 While I have the opportunity in front of the 24 Council, I also wanted to point out and thank Roger 25 Findley and Gary Pearson for their comments earlier.</p>	<p style="text-align: right;">Page 68</p> <p>1 statement that I'm concerned with over there in Adrian, 2 Oregon.</p> <p>3 HEARING OFFICER WEBSTER: So come back up. 4 MR. ARNOLD TROPF: I'm a recipient of a heart 5 pacemaker. I've got a monitor that's supposed to work 6 with cell phone connections, and I, myself, and several 7 other people in Adrian --</p> <p>8 HEARING OFFICER WEBSTER: Hang on just one 9 sec. I just want to reintroduce you. You're Mr. Tropf; 10 right?</p> <p>11 MR. ARNOLD TROPF: Arnold Tropf. 12 And I'm very concerned about my situation as 13 far as communications. What would this, what kind of an 14 adverse effect would this have on our communications 15 being's we don't have much now with this transmission 16 line going through? Because it used to be that I used 17 to use CenturyLink through their phone network but they 18 discontinued it. So I don't have 24/7, which I need to 19 have. But I can't get transmission out of there now. 20 So I don't know what would happen if it did, if I did 21 get it, would I be able to use it with this transmission 22 line, with static?</p> <p>23 HEARING OFFICER WEBSTER: At this point we are 24 here just to get public comment and not answer those 25 questions.</p>
<p style="text-align: right;">Page 67</p> <p>1 When this whole project started, I was involved with it 2 from the get-go back in 2006 when it was first 3 identified. In fact, it came out in an IRP in the 4 summer of 2006. We do a road show to talk about the 5 plan with the public. And literally that fall of 2006, 6 I was over here in this room next door explaining the 7 whole plan to everybody. I met Roger and his wife Jean 8 and Gary, along with probably about 300 other people 9 that were here that night, which has to be the largest 10 crowd we've ever had for one of our IRP meetings.</p> <p>11 So anyway, I wanted to thank those folks for 12 their comments. They expressed some concerns still with 13 some routing issues, but in general I think they were 14 very complimentary to Idaho Power on the efforts we've 15 made to reach out to the public and everybody that we 16 realize is going to be impacted by this line.</p> <p>17 HEARING OFFICER WEBSTER: Any further 18 questions from Council for Mr. Stokes? Thank you.</p> <p>19 Has anybody joined us that would like to give 20 public comment this evening?</p> <p>21 As I indicated, we will be hanging around here 22 until 8:00, but we'll go off the record, and we will 23 reconvene if we need to. But at this point I want to 24 thank you all for coming and participating.</p> <p>25 MR. ARNOLD TROPF: Could I make one more</p>	<p style="text-align: right;">Page 69</p> <p>1 MR. ARNOLD TROPF: That's just another 2 concern.</p> <p>3 HEARING OFFICER WEBSTER: Thank you. 4 MR. CARL MORTON: I'm Carl Morton.</p> <p>5 HEARING OFFICER WEBSTER: If you would just 6 state and spell your name and address for the record. 7 MR. CARL MORTON: My name is Carl Morton, 8 M-o-r-t-o-n. We have property at 2185 Rock Springs 9 Canyon Road.</p> <p>10 Our concern is that we have livestock in the 11 area, and we do have other properties next to the power 12 line that goes out toward Burns. When we're out there 13 it's very concerning because our horses can feel the 14 electricity, and the cows don't hang around it. We do 15 have irrigation systems that are aluminum, and when the 16 lightning storms come in we don't even change the water 17 just because of the issues of electricity.</p> <p>18 We do have a very scenic area out there. As 19 Mr. Bowman stated, the eagles, we have deer around, we 20 have a lot of wildlife out there. And where your guys' 21 power line is going right next to our property is 22 probably within 50 feet. I'm pretty sure you wouldn't 23 like that power line next to your house. I don't want 24 to get up in the morning and see that thing or hear it.</p> <p>25 We have grandkids, they're going to be around.</p>



**ESTERSON Sarah \* ODOE**

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**From:** Dan Turley <Dan.Turley@pgn.com>  
**Sent:** Wednesday, August 21, 2019 3:40 PM  
**To:** B2H DPOComments \* ODOE  
**Cc:** Dan Turley; TARDAEWETHER Kellen \* ODOE  
**Subject:** [Fortimail Spam Detected] Glass Hill Coalition Comment Letter to EFSC B2H Draft Proposed Order  
**Attachments:** 20190820 Glass Hill Coalition Comment Letter to EFSC B2H Draft Proposed Order.pdf

Hello,

Attached comment letter submitted on the B2H Draft Proposed Order from the Glass Hill Coalition.

Sincerely,  
Dan Turley

August 20, 2019

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, Oregon 97301

RE: Comments on the Boardman to Hemmingway Transmission Line Site Certificate Draft Proposed Order

The following comments are focused on ensuring the adverse impacts of the Morgan Lake Alternative west of La Grande Oregon are known to the Council and intended to identify significant issues that we believe were not fully considered in the Draft Order and should prevent the Alternative Route from being permitted.

The proposed Order recognizes the Oregon Statewide Planning Goal 4: Forested Lands (OAR 660-015-0000(4)) but we do not understand why the application of this goal does not preclude the permitting of the Morgan Lake alternative as the Proposed Route meets a specific requirement of this goal by predominately following an existing 230 kv transmission line and a natural gas line in accordance with the 'Implementation' criteria #7 from Goal 4 which specifically states - "Maximum utilization of utility rights-of-way should be required before permitting new ones." Why doesn't the fact that the Proposed Route predominately follows existing utility right-of-ways not clearly demonstrate that these right-of-ways are not fully utilized and thus should restrict the creation of a new right-of-way?

On page 168 of the Order it provides the following information:

*In areas of big game winter range and critical habitat, UCZPSO 20.09(6) permits conditions to be imposed to require that new structures be located near adjacent existing structures and to share common access roads or locate near existing roads. As the applicant describes, new structures related to the proposed transmission line would follow existing electric, natural gas, and highway corridor as much as feasible in Union County.*

Why would this condition not preclude the use of the Morgan Lake Alternative as both routes will go through 'big game winter range and critical habitat' yet the Proposed Route would follow an existing electrical line and gas line as specified by this condition?

As shown on the attached Idaho Power Map #67 for the Morgan Lake Alternative, between mile marker 11 and 12 the transmission line route will cross property owned by Joel Rice, this property as shown on the attached recorded survey 039-2003 has a Natural Resources Conservation Service Wetland Reserve Easement that encompasses Winn Meadow which is the head waters of Sheep Creek which flows into Rock Creek and then into the Grande Ronde River just south of Hilgard Park. With the criteria shown below from page 241 of the Order, the transmission line location will need to be moved further away from the Ladd Marsh Wildlife Area property corner resulting in this right-of-way being moved closer the meadow and associated springs that feed Sheep Creek than shown on Map #67:

*Because an evaluation of an alternative with greater impacts was not completed, in order to satisfy OAR 345-022-0040(1), the Department recommends Council restrict the site boundary of*

*the Morgan Lake alternative to avoid crossing or siting of facility components within the protected area, as follows:*

***Recommended Protected Areas Condition 2:*** *During design and construction of the facility, if the Morgan Lake alternative route is selected, the certificate holder shall ensure that facility components are not sited within the boundary of the Ladd Marsh Wildlife Area. The certificate holder shall provide to the Department a final design map for Union County demonstrating that the site boundary and facility components are located outside of the protected area boundary.*

Why doesn't this easement on Joel's property afford this area a 'protected classification' and preclude the line from crossing or impacting its resources and other remarkable values.

The location of the line adjacent to the head waters of Sheep Creek should also be considered significant/protected as the Grande Ronde River Basin to include its tributaries continues to have declining water flows and the activities of the line construction and the creation of a utility corridor through this basin could further hinder the water flow from the springs in this small basin and thus the Grande Ronde River.

The attached photo was taken from the south end of Winn Meadow shows the relationship of the Morgan Lake Alternative route to Winn Meadow and the basin at the head end of Sheep Creek. As can be seen from the photo would also have a significant negative visual impact on this area as would the entire route as the Morgan Lake Alternative goes through predominately undeveloped forest and range lands.

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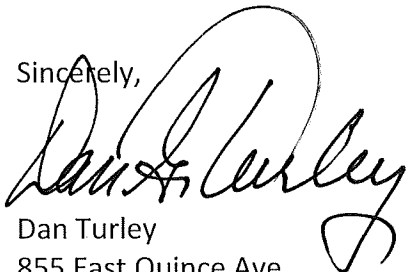
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*3. New electrical transmission lines with right of way widths of up to 100 feet as specified in ORS 772.210.*

This would indicate that the right-of-way width through 'predominately forested' areas would be limited to 100 feet wide and not the 250-foot right-of-way that is stated in the Idaho Power permit application, but the proposed order does not seem to provide a requirement for this criterion to be followed?

Sincerely,



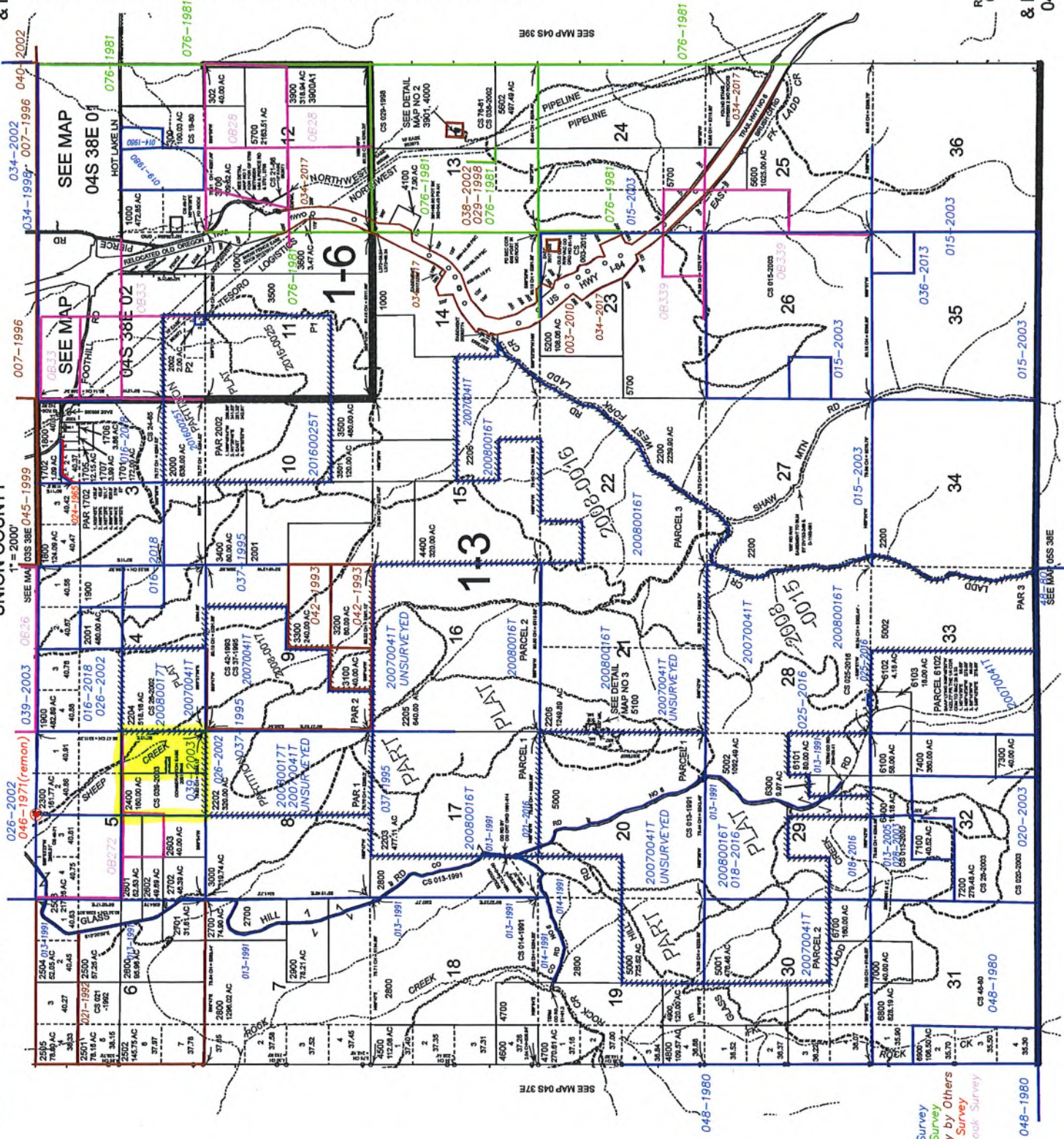
Dan Turley  
855 East Quince Ave  
Hermiston, Oregon 97838

Representing the Glass Hill Coalition







04S38E  
& INDEX

BGB Survey  
APA Survey  
Survey by Others  
Voelz Survey  
Old Book Survey

Revised: SH  
03/22/2018

**& INDEX**  
**04S38E**



SCALE: 1"=300'

# BASIS OF BEARING

Forward bearing as published by the U.S.G. and G.S. from  $\Delta$  COLLEGE to  $\Delta$  VALLEY Dated 1946.

## LEGEND

- Set 5/8" iron pin with yellow plastic cap marked "BOB SURVEY MARKER".
- Found 5/8" iron pin with 2 1/2" aluminum cap, set by Survey number 26-2002.
- Found 2 1/2" aluminum monument as per Union County Monumentation records.
- Found 2 1/2" aluminum monument, set by Survey number 26-2002.
- Record measurement of GLO contract No. 388, by W. B. Barr, dated 7 May 1881
- Posted Easement Boundary

Existing fence line

## REFERENCE MATERIAL

Union County Monumentation Records  
Original GLO Contract No. 388, by W.B. Barr, dated 7 May 1881  
Union County Survey No. 26-2002

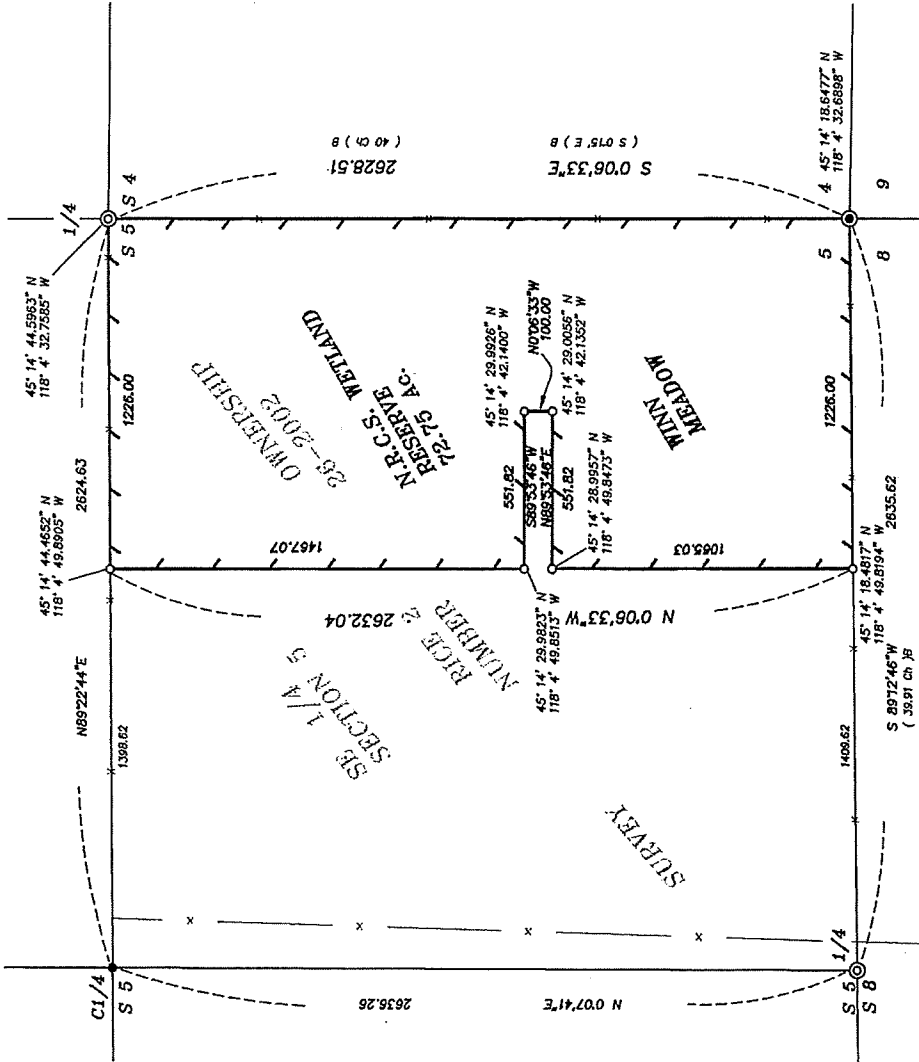
<b>BACETT, GRIFFITH &amp; BLACKMAN</b> Map of Survey 2008 Adams Avenue, LeBonds, Oregon	
Welland Reserve Easement Boundary Located in the Southeast Quarter of Section 5, Township 4 South Range 38 East of the Willamette Meridian Union County	
SURVEYED FOR	N.R.C.S. and Dr. Joel Rice
SURVEYED BY	G.T.B.
Scale 1" = 300' Drawn by G.T.B. 11-4-03	

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

*Gregory T. Blackman*  
JUL 15 2003  
GREGORY T. BLACKMAN  
991

Renewed Date Dec. 31, 2003

UNION COUNTY SURVEYOR	Date Received 11/5/03
Date Paid 11/16/03	By <i>R. B. Barr</i>
File No. 039-2003	



## NARRATIVE

This survey was done at the request of Dr. Joel Rice and the Natural Resources Conservation Service. Dr. Rice and the N.R.C.S. wanted to monument and post the Welland Reserve Easement boundary on Dr. Rice's property. I located the property lines by using a previous Survey 26-2002, for Boise Building Solutions. The Easement boundary was marked by Dr. Rice and Alan Barr of the N.R.C.S. I placed monuments at these marked locations on the line. The North, East and South lines of the easement were determined by Dr. Rice. Easement lines located by said survey 26-2002. I find no unusual conditions on this survey.

Parcel  
Rice, Joel  
04538E02400





Photo looking north from south end of  
Winn Meadow - Morgan Lake Alternative  
route would result in placing the  
'right-of-way' and associated towers  
through the trees on the right side  
of this photo -

## TARDAEWETHER Kellen \* ODOE

---

**From:** Dan Turley <saveglasshill@gmail.com>  
**Sent:** Thursday, August 22, 2019 11:34 AM  
**To:** B2H DPOComments \* ODOE  
**Cc:** TARDAEWETHER Kellen \* ODOE  
**Subject:** Fwd: Glass Hill Coalition Comment Letter to EFSC B2H Draft Proposed Order  
**Attachments:** 20190820 Glass Hill Coalition Comment Letter to EFSC B2H Draft Proposed Order.pdf

I am resubmitting this testimony on behalf of the Glass Hill Coalition. I had previously submitted this testimony from my PGE email account which could create unintended confusion. PGE is not affiliated in any way with the Glass Hill Coalition.

Thank you,  
Dan Turley

----- Forwarded message -----

**From:** Dan Turley <[Dan.Turley@pgn.com](mailto:Dan.Turley@pgn.com)>  
**Date:** Thu, Aug 22, 2019, 10:06 AM  
**Subject:** Fwd: Glass Hill Coalition Comment Letter to EFSC B2H Draft Proposed Order  
**To:** Dan Turley <[saveglasshill@gmail.com](mailto:saveglasshill@gmail.com)>

---

**From:** Dan Turley <[Dan.Turley@pgn.com](mailto:Dan.Turley@pgn.com)>  
**Sent:** Wednesday, August 21, 2019 3:39 PM  
**To:** B2H.DPOComments@Oregon.gov  
**CC:** Dan Turley <[Dan.Turley@pgn.com](mailto:Dan.Turley@pgn.com)>, TARDAEWETHER Kellen \* ODOE <[Kellen.Tardaewether@oregon.gov](mailto:Kellen.Tardaewether@oregon.gov)>  
**Subject:** Glass Hill Coalition Comment Letter to EFSC B2H Draft Proposed Order

Hello,

Attached comment letter submitted on the B2H Draft Proposed Order from the Glass Hill Coalition.

Sincerely,

Dan Turley

August 20, 2019

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, Oregon 97301

RE: Comments on the Boardman to Hemmingway Transmission Line Site Certificate Draft Proposed Order

The following comments are focused on ensuring the adverse impacts of the Morgan Lake Alternative west of La Grande Oregon are known to the Council and intended to identify significant issues that we believe were not fully considered in the Draft Order and should prevent the Alternative Route from being permitted.

The proposed Order recognizes the Oregon Statewide Planning Goal 4: Forested Lands (OAR 660-015-0000(4)) but we do not understand why the application of this goal does not preclude the permitting of the Morgan Lake alternative as the Proposed Route meets a specific requirement of this goal by predominately following an existing 230 kv transmission line and a natural gas line in accordance with the 'Implementation' criteria #7 from Goal 4 which specifically states - "Maximum utilization of utility rights-of-way should be required before permitting new ones." Why doesn't the fact that the Proposed Route predominately follows existing utility right-of-ways not clearly demonstrate that these right-of-ways are not fully utilized and thus should restrict the creation of a new right-of-way?

On page 168 of the Order it provides the following information:

*In areas of big game winter range and critical habitat, UCZPSO 20.09(6) permits conditions to be imposed to require that new structures be located near adjacent existing structures and to share common access roads or locate near existing roads. As the applicant describes, new structures related to the proposed transmission line would follow existing electric, natural gas, and highway corridor as much as feasible in Union County.*

Why would this condition not preclude the use of the Morgan Lake Alternative as both routes will go through 'big game winter range and critical habitat' yet the Proposed Route would follow an existing electrical line and gas line as specified by this condition?

As shown on the attached Idaho Power Map #67 for the Morgan Lake Alternative, between mile marker 11 and 12 the transmission line route will cross property owned by Joel Rice, this property as shown on the attached recorded survey 039-2003 has a Natural Resources Conservation Service Wetland Reserve Easement that encompasses Winn Meadow which is the head waters of Sheep Creek which flows into Rock Creek and then into the Grande Ronde River just south of Hilgard Park. With the criteria shown below from page 241 of the Order, the transmission line location will need to be moved further away from the Ladd Marsh Wildlife Area property corner resulting in this right-of-way being moved closer the meadow and associated springs that feed Sheep Creek than shown on Map #67:

*Because an evaluation of an alternative with greater impacts was not completed, in order to satisfy OAR 345-022-0040(1), the Department recommends Council restrict the site boundary of*



*the Morgan Lake alternative to avoid crossing or siting of facility components within the protected area, as follows:*

***Recommended Protected Areas Condition 2:*** *During design and construction of the facility, if the Morgan Lake alternative route is selected, the certificate holder shall ensure that facility components are not sited within the boundary of the Ladd Marsh Wildlife Area. The certificate holder shall provide to the Department a final design map for Union County demonstrating that the site boundary and facility components are located outside of the protected area boundary.*

Why doesn't this easement on Joel's property afford this area a 'protected classification' and preclude the line from crossing or impacting its resources and other remarkable values.

The location of the line adjacent to the head waters of Sheep Creek should also be considered significant/protected as the Grande Ronde River Basin to include its tributaries continues to have declining water flows and the activities of the line construction and the creation of a utility corridor through this basin could further hinder the water flow from the springs in this small basin and thus the Grande Ronde River.

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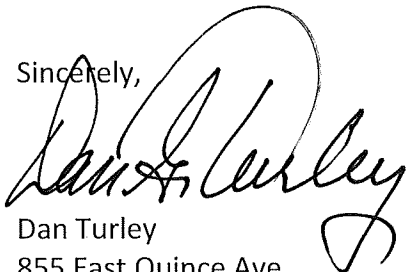
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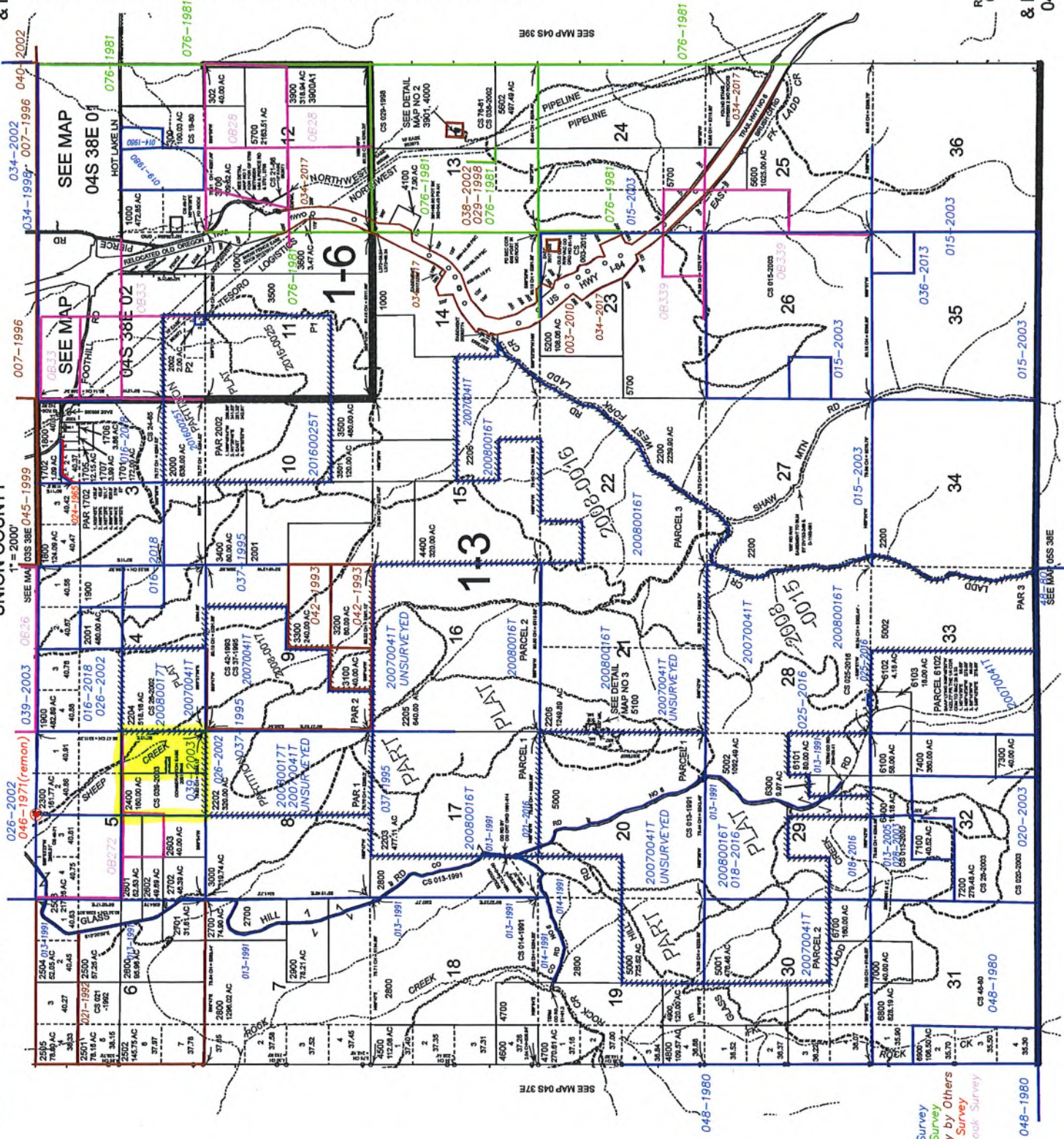
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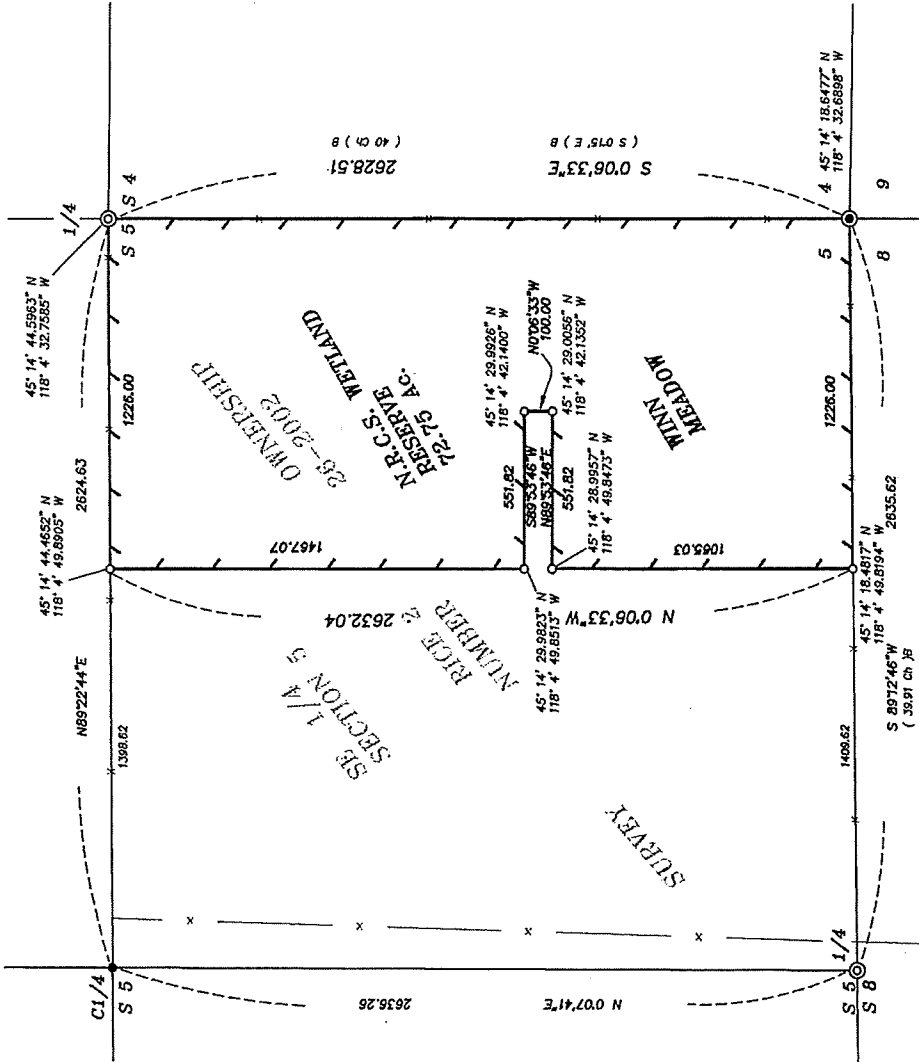
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Scale 1" = 300' Drawn by G.T.B. 11-4-03	

REGISTERED PROFESSIONAL LAND SURVEYOR
<i>Gregory T. Blackman</i> JUL 14 2003 GREGORY T. BLACKMAN 991
Renewed Date Dec. 31, 2003

UNION COUNTY SURVEYOR
Date Received 11/5/03 Date Paid 11/16/03 By <i>R. B. BACETT, D. GRIFFITH, D. BLACKMAN</i> File No. 039-2003



## NARRATIVE

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Photo Looking north from South end of  
Winn Meadow - Morgan Lake Alternative  
route would result in placing the  
'right-of-way' and associated towers  
through the trees on the right side  
of this photo -





# Oregon Department of Energy and the Energy Facility Siting Council

Public Hearing on the Draft Proposed Order  
for the Boardman to Hemingway Transmission Line  
June 18-20 and June 26-27, 2019, 4:30-8 p.m.  
Public Written or Oral Testimony Registration

Name (mandatory) Kerry Tuxit

Mailing Address (mandatory) PO Box 3374  
LaGrande OR 97850

Phone Number (optional) ( ) \_\_\_\_\_ Email Address (optional) \_\_\_\_\_

Today's Date: 6-20-19

Do you wish to make oral public testimony at this Hearing: Yes X No \_\_\_\_\_

Written comments can also be submitted today.

All written comments must be received by the deadline, July 23, 2019, 5 p.m. PDT to:

Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE  
Salem, OR 97301  
Fax: 503-378-6457  
Email: [B2H.DPOComments@oregon.gov](mailto:B2H.DPOComments@oregon.gov)

Note: by submitting written or oral testimony, you will receive a notice from the Oregon Department of Energy at a future date of the opportunity to request party status in a contested case hearing on the proposed facility.

## Written Testimony

(Please print legibly – Use the back for additional space if needed. Additional written comments may be attached to this card.)

- 1 - ODFW told me that I could not Build on the proposed location due to the wildlife. why is this now an option?
- 2 - last year Idaho power told me that my home was too close to the proposed placement. Has this been resolved?



<p style="text-align: right;">Page 122</p> <p>1 Next we will hear from Mr. Tweit, followed by 2 Michael McAllister. 3 MR. KERRY TWEIT: Hi, my name is Kerry Tweit, 4 T-w-e-i-t. I'm located, currently living at 74 West 5 Hawthorne. 6 The location of my current house is, at this 7 point in time, from what I was told last fall by Idaho 8 Power, less than 1500 feet away from where one of the 9 towers are supposed to go on my property. I was told 10 that -- last fall they showed up at my property for the 11 first time that I talked to them on the property. And 12 they said they were surprised and wanted to know why 13 there was a house there. I said, Well, it's been in the 14 plans since I bought the property 10 years ago. All 15 they had to do was ask the County. 16 And he told me they weren't aware of it, and 17 that it was going to present a problem. I said, Well, 18 what are the alternatives? We said, Well, we either 19 move the house or we move the transmission lines; it's 20 too close. 21 That made me fairly stressed. This home that 22 I built, as you heard from Mr. Horst earlier tonight, 23 and he talked about the location being a little piece of 24 heaven. I looked for a long time before I purchased 25 property, and when I found this property, I was</p>	<p style="text-align: right;">Page 124</p> <p>1 endangered species assessment on my property. I asked 2 him why. He said, Because there is going to be power 3 lines built on your property. My response was, No, 4 there is not. Nobody has ever told me this. His 5 response was, It's a done deal, it's going to happen. I 6 said, Well, why wasn't I told? 7 Immediately following that conversation, I 8 went down to the County, I spoke with Scott Cartel [ph] 9 and he told me that I had been notified. I said, Well, 10 why would I be here if I had been notified. He said, 11 Well, it says right here on the computer that you were 12 notified. I wasn't. 13 So there has been some frustration in probably 14 the clarity that Idaho Power -- I am right in the middle 15 of a really important proposed location for them. They 16 want to come down off the ridge and make a 90-degree 17 turn right on my property. 18 Probably another real significant issue there 19 is when I first purchased the property I was required to 20 do a wildlife assessment through Oregon Fish and 21 Wildlife. The first three times that Oregon Fish and 22 Game came up to my property they told me no. They said 23 it was too sensitive of a wildlife corridor and they 24 wouldn't let me build anywhere on my property. I fought 25 that. They came out the fourth time and said that they</p>
<p style="text-align: right;">Page 123</p> <p>1 extremely impressed by, I was close to town, but it was 2 remote. I have game cameras on the property. We have a 3 lot of elk, deer, bears. We get quite a few cougars 4 that come through. I usually get a dozen or so pictures 5 a year. We have fox. We have a lot of animals up 6 there. It's really a wonderful place to be. 7 The sunrise and sunsets are breathtaking, to 8 the point where I designed to build the house that the 9 entire roof is a deck so I can watch that every morning 10 and every night. I actually have a hot tub up there 11 that I sit in and watch the sunrise and the sunsets. 12 The sunsets are, when I look that direction, are right 13 where the towers are going to go. 14 Also, on my property, when I first built it 15 for fire protection, the County required that I had 16 approximately 1500 gallons of fire protection, 60 psi. 17 So I put a 3000-gallon tank on the hill, which is the 18 exact location of where they want to put one of the 19 towers. I'm not sure how that will be mitigated, but 20 apparently it's going to have to go. Another plan that 21 I wasn't aware of. 22 The other thing that happened through Idaho 23 Power at the beginning was I received a phone call, it's 24 been approximately 2 years ago, from a gentleman from 25 Humboldt University telling me that he wanted to do an</p>	<p style="text-align: right;">Page 125</p> <p>1 would agree to let me build as long as I only built on 2 the very eastern portion of my property. 3 The proposed tower that is going to go on my 4 property and control station is right in the middle of 5 what Fish and Wildlife told me I could not build it 6 because it was too sensitive of an area. Another 7 setback. 8 So now I have my house finished and built. I 9 am living in my dream home. And it looks as though that 10 is all going to change. 11 I haven't been told by Idaho Power how they 12 are going to rectify the issue that my house is less 13 than 1,500 feet from their proposed site. They haven't 14 responded to that. All they said was that they would 15 figure it out. So I still haven't been told that. 16 You have already heard from some of the other 17 people on Hawthorne Drive about their concerns about 18 obviously the beauty, the looking at the power lines, 19 the sound of the transmission lines. The gentleman from 20 Idaho Power told me that one of the main reasons that 21 they wanted nobody within 1,500 feet of those power 22 lines was because of the noise. 23 I asked him if it was a safety issue. And he 24 said, Well, there has been people in the past that have 25 implied that it was, but there has never been a court</p>

<p style="text-align: right;">Page 126</p> <p>1 litigation that had proven that. So I have to trust 2 them on that, I guess. 3 I think you'll have to understand, I'm a 4 little bit skeptical about this. Idaho Power hasn't 5 been -- I haven't been contacted -- I mean, I have now. 6 But through this planning process, I really wasn't 7 contacted. Nobody came to my place and looked at the 8 site. I don't know if they know there is a pond right 9 next to where they want to put this tower. I don't know 10 if they understand I had to put a well in 700 feet deep, 11 the water is amazing. I don't know if that will change. 12 The road coming up Hawthorne has to have a lot 13 of annual maintenance on it for just three houses. The 14 idea of them hauling that heavy equipment, and I don't 15 know what they are going to do to improve or better that 16 road, my concern is they will make it worse. Only 17 because of the limited history that I've had with them 18 hasn't really been very supportive. Tonight was the 19 first night that I got a chance to listen to this many 20 people talk about their concerns. 21 Honestly, I'm more concerned now than before I 22 came in. I have heard a lot of information tonight that 23 kind of would make, I think, anybody in my shoes afraid 24 of the future of what's going to happen up there. I 25 love this place. I think it's going to change</p>	<p style="text-align: right;">Page 128</p> <p>1 For everybody here, if you are looking at 2 the computer screen that's up on the back wall, there is 3 a third power line, which is the green route. There is 4 red, green, and yellow. And I'm pleased to see that the 5 green line was turned on this evening. It wasn't on 6 when I originally looked at it. 7 I also came in late and I was told that I'm 8 not supposed to advocate for the western route 9 recognized by the BLM and environmental analysis because 10 it has not been applied for. That route is what I've 11 been involved with advocating for for 10 years now, 12 since day one, really. 13 I think I probably wrote Adam Bless, with the 14 Oregon Energy Council, probably the first letter he 15 received with my concerns about siting this line through 16 Union County here. And with an empirical background for 17 virtually every acre of the stretch from Hilgard to Ladd 18 Canyon that probably nobody else has, I feel like it's 19 my community contribution to represent it as completely 20 and as well as I can. 21 The green route is by far the superior route 22 when you consider just about any aspect; fish, forest, 23 wildlife, range, fire, feasibility, all the above. In 24 my analysis collecting facts relative to all these 25 resources, the green route is by far the best route.</p>
<p style="text-align: right;">Page 127</p> <p>1 dramatically. That is all I have. 2 HEARING OFFICER WEBSTER: Thank you. 3 Following Mr. McAllister we have Charles 4 Gillis on deck. 5 MR. MICHAEL McALLISTER: I'm Michael 6 McAllister. I live at 60069 Morgan Lake Road right at 7 the top where you confront the wind as you break the 8 summit. 9 I am of the Move B2H camp, an advocate of 10 moving and have been for at least 10 years, when the 11 initial proposed route was presented. I am a natural 12 resource inventory expert, and made a career 13 inventorying fish, forest, wildlife, range, ozone 14 damage, carbon sequestration. I collect facts from the 15 landscape and have been in La Grande since 1979, when I 16 lived right below lower Morgan Lake, which apparently is 17 not recognized by Idaho Power. 18 The eagles built two nests right above my wall 19 tent where I lived as I went to school here at Eastern 20 Oregon University. And it's really a pleasure to be 21 here tonight with the community and hearing all of their 22 different concerns and considerations. It's always been 23 above my mental capacity to explore the rightness or 24 wrongness of the power line; so I have focused on moving 25 B2H.</p>	<p style="text-align: right;">Page 129</p> <p>1 And I can honestly say that it's a travesty that, for 2 whatever reason, Idaho Power has chosen to completely 3 disregard that route. I have seen no evidence in 4 10 years that Idaho Power has shown any consideration of 5 that route. I think it's appalling. 6 I do credit Idaho Power for having in the 7 10 years considered routes through John Day, extensively 8 routes through the Blue Mountains, and having recognized 9 the importance of not further fragmenting large-scale 10 forest tracks, and that the I-84 corridor is probably 11 the best route. But specifically through this neck of 12 the woods, through Union County, Ladd Canyon, I think 13 every concern I've heard here this evening can be 14 mitigated by placing this transmission line on the 15 environmentally-preferred route. 16 And I am providing comment, written comment 17 that will specify as well as I can with the time that I 18 have. I don't believe it's up to me to demonstrate a 19 burden of proof to this end, but I'm doing my best to do 20 that. 21 And I thank you all for your listening here 22 this evening. 23 HEARING OFFICER WEBSTER: Thank you. 24 Following Mr. Gillis, we will hear from, I 25 believe it's John Winters, if I'm reading that</p>

## TARDAEWETHER Kellen \* ODOE

---

**From:** RTweten <rascladat@gmail.com>  
**Sent:** Wednesday, August 14, 2019 4:46 PM  
**To:** B2H DPOComments \* ODOE  
**Cc:** Randy  
**Subject:** Comment Letter to B2H Transmission Line and EFSC permitting process  
**Attachments:** B2H\_Insufficient Adress of ESA fish species-habitats.docx

Dear Sirs/Madams:

Please see my attached letter of protest for the current proposed B2H DPO and my request that you, State of Oregon, ODE, deny the Site Certificate Application as currently presented by Idaho Power, the applicant.

I am available for further address of these issues I present if you'd like. You can contact me through email, which would be best.

Thank you for your time and effort, and for attending to the issues I raise in this very controversial, less than complete, application.

Sincerely,

Randy Tweten  
608 N Avenue  
La Grande, OR 97850

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Far and away the best prize that life has to offer is the chance to work hard at work worth doing. Theodore Roosevelt

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Energy Facilities Siting Council  
c/o Kellen Tardaewether, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol St, N.E.  
Salem, OR 97301

Sent Via E-Mail: [B2H.DPOComments@Oregon.gov](mailto:B2H.DPOComments@Oregon.gov)

Subject: Idaho Power Application for a Site Certificate for the Boardman to Hemingway Transmission Project 9/28/2018; Draft Proposed Order.

Dear Chair Beyeler and Members of the Energy Facility Siting Council:

I request that my letter protesting issuance of an Oregon Site Certificate for the currently proposed Boardman-to-Hemingway Transmission Project (B2H Project) be entered into the permanent written record. I also request response to, and resolve of, the issues I raise herein.

Specifically, the applicant, Idaho Power (primary) has failed to acknowledge, and as a result, address fully the presence of a Federal and State-listed, Threatened species. It has also failed to identify and address the effects of the proposed action on, not only the listed species, but the Category-1, and Federal designated Critical Habitat. A co-sponsor of the project, Bonneville Power administration, is also a party to the Federal Columbia River Power System (FCRPS) Biological Opinion, requiring them to promote conservation and recovery of Federally-listed, under the Endangered Species Act, salmon and steelhead in the interior Columbia Basin.

The Draft Proposed Order (DPO), p. 304, lines 20-26, fails to list Bull Trout, a listed State-Sensitive Threatened Species, also listed as Threatened by USFWS. Similarly, the DPO only gives brief identification of federally listed Mid-Columbia River and Snake River steelhead, and Snake River spring/summer and fall Chinook salmon. OAR-345-021-0010 (1)(p) requires identification of all fish and wildlife at the proposed location, and identification of habitat classification categories, as set forth in OAR-635-415-0025, in order to comply with OAR-345-022-0060, requiring identification of habitat categories and required mitigation.

Compliance with the federal Endangered Species Act (ESA) requires identification and address of the effects of the proposed action through ESA section 7(a)(2) consultation with the NMFS (anadromous fish species) or USFWS (resident fish species). ESA section 7(a)(1) also requires that federal actions (the BLM EIS/permitting) are implemented in a manner to promote the recovery of listed species. The ESA consultation process requires that the action agency (in this case BLM with USFS input for their lands), identify and speak to the effects of the action, both on the 'animal' AND on the designated critical habitat. The DPO does none of this, hence fails this requirement. Additionally, the DPO does not adequately address the adverse impacts to Federally designated critical habitat (DCH). DCH for Snake River spring/summer Chinook salmon is identified as "all areas with historical presence", and is NOT found only where they exist today. DCH ESA determinations of 'may effect' are linked to the standing PACFISH riparian habitat conservation areas (buffers) on both BLM and USFS lands. This equates to a 300-foot buffer on main rivers, and a 150-foot buffer on perennial tributaries (100-foot buffer on intermittent streams). The DPO speaks to only stating there will be no roads below 'ordinary high-water mark'. This in no uncertain terms addresses the Primary Constituent elements of the DCH for salmon OR steelhead.

The applicant has failed to comply with both federal and state requirements to address adverse effects of the proposed action on identified threatened (state or federal designation) fish species and their habitats!

The Grande Ronde River watershed contains a well-documented population of Bull Trout, Snake River steelhead, and Snake River spring/summer Chinook salmon. By state statute, wherever a portion of a watershed contains a Threatened or Endangered species, the entire watershed is reviewed for its potential impacts to those species under federal protection. The Grande Ronde River watershed encompasses the entirety of Union county, and the majority of Wallowa county. As evaluated in the DPO, ASC Exhibit P, suitable habitat used by state-listed Threatened and Endangered species is designated pursuant to ODFW's Habitat Mitigation Policy, and EFSC's Fish and Wildlife Habitat standards, as Category-1 Habitat, where any impact, direct or indirect is prohibited. There is NO mitigation for Category-1 Habitat! And given the DPO does not address federal ESA consultation requirements, it too, is out of compliance and undercutting the purpose of this federal law.

The DPO, p. 304, line 32, through p. 307, line 21, acknowledges that there will be impact, but is unable to quantify it. Since any impact is prohibited for Cat-1 Habitats, the magnitude of impact becomes irrelevant, rather, not lawful. Hence, the applicant has failed to meet the requirements for issuance of a Site Certificate contained in OAR-345-022-0080, and the Idaho Power's B2H proposed action's permit, being not in in compliance with state nor federal protected species laws, should be denied.

In view of the fact that sufficient recovery of the area's Bull Trout, SR-steelhead, and SR s/s Chinook salmon populations and their down-listing from its Threatened status is reliably projected to be a matter of decades, and especially with the current and projected compounding effects of climate change, issuance of a **Site Certificate by the State of Oregon should be denied, with prejudice!**

Sincerely,

S/N Randy G. Tweten

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