



Oregon
Department
of Agriculture

State of Oregon Department of Agriculture
State of Oregon Department of Environmental Quality

**Confined Animal Feeding Operation (CAFO)
NPDES Proposed CAFO Individual Permit for Lost
Valley Farm, Greg teVelde**



State of Oregon
Department of
Environmental
Quality

Response to Public Comments

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I. SUMMARY

The Oregon Department of Agriculture (ODA) and Department of Environmental Quality (DEQ) provided a public notice and comment period on the proposed new Confined Animal Feeding Operation (CAFO) in ODA Area 5 (North Central Oregon). On June 28, 2016, the agencies issued a Public Notice. On July 28, 2016, a public hearing was held in Boardman at the Port of Morrow Riverfront Center. This initial public comment period closed August 4, 2016. The agencies re-opened the comment period from October 3, 2016 to November 4, 2016 after receiving a request from the State Environmental Justice Task Force. ODA and DEQ received 4,147 comments on the proposed permit.

- 1993 of the comments were form letters opposed to issuing the permit.
- 2117 people total signed two petitions submitted in opposition (1868 on one and 249 on another).
 - 7 of the 2117 petitioners provided additional written comments.
- 156 people provided individual written comments (9 in favor and 147 opposing the permit).
- 77 people attended the public hearing held in Boardman.
- 7 oral comments were provided at the hearing (6 in favor and 1 with concerns about the permit details).

The permit is an individual National Pollutant Discharge Elimination (NPDES) CAFO (Confined Animal Feeding Operation) permit, prepared through Federal Clean Water Act (CWA) authority delegated to the State of Oregon. This permit package consists of three documents: An NPDES permit, a permit evaluation report (PER), and an Animal Waste Management Plan (AWMP). The permit and the AWMP by reference, provide the required conditions, controls, limits and monitoring necessary for environmental protection associated with the facility and its operations. The PER provides the science and policy basis for the permit and AWMP.

Summary of oral comments:

Oral comments at the public hearing were largely supportive of the proposed dairy citing: positive economic impacts; good management of manure and water resources; use of best management practices that are sustainable; and provision of good union jobs. A commenter expressed concerns that the dairy started construction before the permit has been issued; potential negative impacts to ground and surface water; nitrogen level impacts from applications; fugitive dust and odors; and access to the dairy for animal welfare concerns. Responses to these concerns can be found below.

Comments that address issues that are beyond the scope of the permit:

Many of the written comments including the form letters, addressed the following areas of concern: 1) Air Quality; 2) Worker Safety, and 3) Animal Health/Welfare, 4) antibiotic resistance, and 5) other miscellaneous issues. ODA and DEQ acknowledge these concerns, but they are either not within ODA and DEQ's authority, or are addressed through regulatory mechanisms other than a water quality permit. However, a summary addressing each concern is found below.

1. Air Quality

Comments included concerns that emissions from the dairy would contribute to the Columbia River Gorge National Scenic Area haze problems, contribute to Greenhouse Gas emissions, cause fugitive dust problems, and impact criteria air pollutants. All of these comments were related to air emissions and the impacts of the dairy on air quality.

The comments regarding air quality are beyond the scope of the proposed NPDES CAFO Individual Permit. The proposed Permit can only regulate discharges to surface and ground waters of Oregon. DEQ is the Oregon Agency responsible for implementing the Clean Air Act (CAA) and issuing air quality permits where required. ORS 468A.020(1)(a) exempts agricultural operations from most air quality laws. Currently, the only requirement for CAFOs in Oregon to obtain an air permit from DEQ is for combusting biogas from a digester. While the Lost Valley Ranch (LVF) AWMP does mention a digester, the applicant has informed the agencies that he does not plan to implement a digester at this time. However, the applicant indicated he would consider implementing a digester at a later date if it is economically feasible. If a digester is added as part of the waste treatment facilities at a future date, the agencies would review the proposal and require the appropriate air permit.

The Columbia River Gorge National Scenic Area Study of 2011 identifies ammonia emissions from animal feeding operations (AFOs) as one of the sources of haze. The agencies agree that the report's 2-part strategy for reducing emissions from dairy CAFOs is important to consider and agree that the dairies should implement Best Management Practices for emission reductions and participate in voluntary programs to reduce emissions. ODA has required existing large CAFOs to calculate their ammonia emissions and report them under the CAA community right to know section. Permit conditions in the CAFO NPDES individual Permit must address Clean Water Act requirements but, the agencies have suggested that LVF calculate the potential air emissions of ammonia and hydrogen sulfide from the facility and report those amounts according to EPCRA section 304. LVF intends to implement a long list of water quality best management practices (BMP) and many of those practices also have a benefit for air emissions. BMPs consist of both structural and management practices. Some of structural BMPs to be implemented include:

- *Storing feed in sealed or covered structures*
- *Bio-Link manure treatment*

- *Covered manure storage facilities*

Some of the management BMPs to be implemented include:

- *Advanced ration formulation for protein source, amount and starch content that has been shown in research trials to reduce emissions by up to 40%;*
- *Frequent collection of manure from barns and milking center to minimize exposure and emissions;*
- *Planting of nitrogen-fixing crops to remove nitrogen compounds from the atmosphere;*
- *Planting trees to utilize nitrogen;*
- *Maintaining high production efficiency to minimize animal numbers;*
- *Rapid incorporation of land applied solid manure to minimize emissions.*

Greenhouse Gas (GHG) and Criteria Air Pollutants: DEQ Air Programs monitor air pollutants to determine status with National Ambient Air Quality Standards (NAAQS). When ambient monitoring reveals a NAAQS violation, DEQ takes necessary steps to identify the pollutant sources and to implement strategies to retain compliance with the standards. Currently, the DEQ monitoring station in closest proximity to the proposed dairy is located in Hermiston, Oregon.

2. Worker Safety and Overall Human Health Concerns

Commenters expressed concern about the facility's impact on human health generally and specifically on disease control, risks of developing antimicrobial resistance, worker safety conditions, and the effects of milk consumption on human health.

ODA and DEQ can only address concerns about the effect of CAFO facilities on human health that are within the regulatory scope of the Federal Clean Water Act and proposed NPDES CAFO Individual Permit. The Federal Clean Water Act and the proposed Permit prohibit and regulate discharges of pollutants from a CAFO facility to surface and ground waters of Oregon.

With regard to comments about worker safety, ODA and DEQ are not authorized to address such concerns in the NPDES CAFO Individual Permit. The agencies note however, that the Center for Disease Control's National Institute for Occupational Safety and Health (NIOSH) is the Federal agency that conducts research on worker safety and health. In 2005, the NIOSH conducted a Health Hazard Evaluation (HHE) study at Threemile Canyon Farms and issued a report (HETA #2005-0271-2996) that found worker-level concentration of both ammonia and hydrogen sulfide were within recommended levels for worker exposure. This study is relevant information to address the concerns of commenters because the Threemile Canyon Farms facility is of similar size to the facility proposed.

With regard to comments about worker safety, the agencies note that in Oregon, worker safety is overseen by the Oregon Occupational Safety and Health Administration (OR OSHA). All pertinent worker safety regulations would be addressed by OR OSHA. Persons with concerns about worker safety may contact Oregon OSHA or, visit their website for more information:

<http://osha.oregon.gov/Pages/index.aspx>.

3. Animal Health and Welfare

Commenters expressed concern about cow and calf handling, the effects of confinement of animals at the proposed facility, and animal cruelty generally.

Animal health and welfare concern comments are beyond the scope of the proposed NPDES CAFO Individual Permit. The proposed Permit regulates discharges to surface and ground waters of Oregon and only contains provisions that protect surface and groundwater quality (ORS 468B 215(3)). Any animal welfare concerns, including any alleged violations of Oregon animal welfare laws, would be handled by the local sheriff's office or the Oregon Humane Society; <http://www.oregonhumane.org>. The Oregon Humane Society has Humane Special Agents who are certified police officers commissioned by the Oregon State Police to investigate animal crimes.

The Lost Valley Farm operators do participate in the National Milk Producers Federation FARM animal care program at their Willow Creek Dairy site and did have a third party audit in 2016.

4. Antibiotic Resistance

Commenters expressed concern that the use of antibiotics or antimicrobial agents in CAFO facilities leads to antibiotic resistant pathogens.

NPDES permits govern the discharge of waste from CAFO facilities, but do not authorize the agencies to regulate the use of antibiotics or antimicrobials within the facilities themselves.

Notwithstanding the above, the agencies note that the Federal Food and Drug Administration (FDA) has recently enacted new regulations that restrict all animal antibiotic use to only those materials prescribed by a licensed veterinarian under an active Veterinarian/Client Relationship. Since January 1, 2017, FDA prohibits any growth promotion use of antibiotics in food animals. In addition, with regard to detection of pharmaceuticals in food, all milk produced by the proposed dairy will be required to be tested for antibiotic residues and cannot be sold if it violates any FDA standards. Finally, the USDA also conducts surveillance of slaughter facilities to check for antibiotic residues in animal carcasses and rejects any carcass that violates any FDA standards.

With regard to comments about the use of pharmaceuticals as this use may affect public health generally, these comments are beyond the scope of the proposed NPDES CAFO Individual Permit, except insofar as pharmaceutical use could impact water quality. With regard to comments about pharmaceuticals that may be contained in waste, see response to comments below.

5. Miscellaneous comments that address issues that are beyond the scope of the permit

Say "No" to Factory Farms in Oregon (118-339)

Commenters expressed concern about low milk prices resulting from the operation of large dairy facilities and concern that a new Mega Dairy opening will put pressure on remaining family scale dairy farms.

These comments, which address agricultural economics are beyond the scope of the proposed NPDES CAFO Individual Permit issued pursuant to Oregon laws governing water quality and the Federal Clean Water Act.

Deny Mega Dairy (340-378)

Commenters stated that modern science tells us that there is no reason for humans to consume cow's milk and that it is actually detrimental to our health.

These comments related to human dietary concerns, are beyond the scope of the proposed NPDES CAFO Individual Permit, which governs the discharge of pollutants into waters of the State.

NGO Coalition (98): Food & Water Watch, Columbia River Keeper, Friends of Family Farmers, Northwest Environmental Defense Center, Oregon Physicians for Social Responsibility, Oregon Chapter Sierra Club, Friends of the Columbia Gorge, Humane Society of the United States, and Center for Biological Diversity

The NGO coalition commented about the potential of the facility to emit ammonia, greenhouse gases and other air pollutants, as well as expressing concern about the use of pharmaceuticals on the facility that they assert develops antimicrobial resistant pathogens that could ultimately threaten public health.

See above responses regarding concerns about air emissions from CAFO facilities and above responses addressing comments about antibiotic resistance.

II. Responses to Recurring Themes

Various comments included in this document addressed the same or similar concerns. In this section, the Agencies have included some general responses to these comments. Responses to such comments below will be referenced to responses in this section.

1. Commenters note federal regulations require that best professional judgment and best management practices should be applied for surface water discharges in lieu of yet-to-be-established technology based limits for pollutants for which effluent limit guidelines have not been developed on a case-by-case basis for each permit. The commenters further assert that there are significant waste streams such as pharmaceuticals and metals that are not addressed by the effluent limit guidelines for large CAFOs.

It is not clear whether pharmaceuticals and metals will constitute a significant portion of the CAFO waste stream. However, given that this permit prohibits discharges to surface waters, the agencies consider this prohibition sufficient in terms of compliance with the cited federal regulation (including CWA 40 CFR 122.44(a)(1)).

In terms of potential discharges of pharmaceuticals to ground water, with regard to land application activities, the agencies have considered whether animal pharmaceuticals and metals in the CAFO waste stream have the potential to reach ground water. To address this and other ground water concerns, the permit limits on application rates (wastewater, manure and water), the prohibition against effluent leaching below the root zone, and mandatory soil and ground water monitoring should protect the ground water resources from any discharges of wastewater that may contain pharmaceuticals.

In addition, the permit requires monitoring of ground water for nitrate and other pollutants. Nitrate is an indicator of pollution in general because it is relatively stable in ground water, and highly soluble and mobile. Using nitrate, the monitoring required in the permit will enable the agencies to track whether waste materials are moving past the root zone into the water table. If so, irrigation and application rates will be adjusted accordingly.

2. Several commenters expressed concern for: (1) discharges of wastewater runoff to surface waters of the state, (2) sufficiency of protective measures in the permit, (3) sufficiency of monitoring and; (4) application rates of fertilizer.

Because of the existing ground water management area at the proposed dairy site, the Permit contains protective provisions not generally included in CAFO Permits. The individual NPDES CAFO Permit (Permit) proposed for this facility is designed to control all production area and land application area operations so that no discharge occurs to surface waters of the state and any discharge to groundwater does not exceed concentration limits. The Permit includes groundwater protective measures that address agricultural practices at the CAFO so that nitrate trends in the GWMA improve. As such, DEQ and ODA are requiring new wastewater facilities in the GWMA to apply nitrate treatment/controls beyond norms, particularly due to permeable soils in the area and the mechanisms of crop nutrient uptake. These protective measures for LVF include various enhanced requirements: double lined lagoons with leak detection, water chemistry sampling below the root zone, innovative feedback information to control irrigation and fertilization rates and timing, no land application on frozen soil, and LVF is topographically situated such that runoff to surface waters is extremely unlikely.

The Permit prohibits discharges to surface waters, except during a flood of specified magnitude or greater occurs (1 in 25 year probability of a 24 hour design storm). In normal and design storm conditions, any surface discharge is limited to the following: The Permit contains numeric effluent limits restricting any surface water discharge that may occur to the quantitation limit of 0.1 mg/L for nitrate and the quantitation limit of 2 cfu/100 ml for bacteria (cfu-colony forming units). The permit also prohibits discharges of total Kjeldahl nitrogen (TKN) and total phosphorus of 0.2 mg/l and 0.1 mg/l, respectively.

Any discharge to groundwater must not exceed the background concentration limits set by the agencies. Monitoring wells are required at the facility. Given that this facility is a new source in the Groundwater Management Area (GWMA, area of shallow aquifer with excessive nitrate concentrations), the agencies must ensure that the Permit will not allow any further degradation of state waters and have done that with the effluent and groundwater compliance limits. The permit will be issued with interim numeric limits based on available preliminary groundwater monitoring data at the site. Quarterly monitoring has been undertaken (4 wells in production area), and will be expanded to 7 more wells covering the land application area. The monitoring wells will be located around the production and land application areas to evaluate the impact the facility operations have on groundwater. The permit will provide for refinement of the groundwater numeric compliance limits after the first two quarters of data are available from the 7 additional wells following permit issuance, and then after nine quarters of monitoring from all wells (11 or more if needed), final limits will be established for downgradient wells, based on background, for all downgradient compliance wells. Concentration limits are established for nitrate, total kjeldahl nitrogen (TKN), total phosphorous and bacteria.

The numeric concentration limits, shall be established at the background water quality levels of all contaminants as required by OAR 340-040-0030(3)(b).

Land application of manure and process wastewater is allowed in the permit only if it is at or below agronomic application rates and in accordance with the AWMP. The land application area fields at the proposed facility have a history of crop production including pivot irrigated row crop production and drip irrigated tree production. The Permit requires that all fields that receive manure, process waste water or contaminated storm water be monitored and instrumented so that the irrigation activities do not leach specified pollutants including nitrate past the root zone. All fields that receive manure, process waste water or contaminated storm water must have annual, post-harvest soil samples collected and

analyzed for nitrate nitrogen levels at multiple soil depths. Selected fields will have lysimeters, installed immediately below the root zone, to monitor the soil water for nutrient content in the vadose zone. The Permit requires that all of the process wastewater storage lagoons be double lined with synthetic material and equipped with leak detection systems so that any leak will be detected and can be repaired so that no waste from storage facilities enters into groundwater. The process waste storage facilities are not allowed to leak or discharge to groundwater.

The agencies require that the operator install and sample groundwater-monitoring wells and the permit prohibits exceedance of concentration limits set by the agencies based on calculations of data collected from up and downgradient monitoring wells. The permit will be issued with interim numeric limits based on available preliminary groundwater monitoring data at the site. Quarterly monitoring has been undertaken (4 wells in production area), and will be expanded to 7 more wells covering the land application area. The permit will provide for refinement of the groundwater numeric compliance limits after the first two quarters of data are available from the 7 additional wells following permit issuance. After nine quarters of monitoring from all wells (11 or more if needed), final limits will be established for downgradient wells based on background for all downgradient compliance wells. Concentration limits are established for nitrate, total kjeldahl nitrogen (TKN), total phosphorous and bacteria.

The required groundwater-monitoring plan will require quarterly monitoring for a suite of chemical, biological and physical metrics from all of the monitoring wells. The groundwater-monitoring network results will be used to evaluate whether the production area and land application areas are meeting the permit requirements.

The proposed facility must use actual analytical results from samples of manure and process wastewater to calculate agronomic application rates. The actual results will take into account the actual storage volatilization losses and replace theoretical volatilization losses listed in the initial AWMP. The requirement for crop yield and post-harvest soil monitoring for all fields will take into account all forms of nitrogen that are applied to the soil by any means from any source and the amounts removed by the harvested crops.

All land applied manure and process wastewater amounts must be calculated using actual, recent sample data and include all sources of nitrogen to determine the agronomic application rate.

3. The following addresses comments regarding the potential for wastewater runoff to surface waters of the state.

The LVF does not propose to discharge to any surface waters in that it does not have any conveyance or pipe that discharges directly into surface waters. This is a concentrated animal feeding operation that is permitted on the basis of the number of animals that will be confined at the facility rather than due to the facility discharging pollutants to waters of the United States as typically requires NPDES Permit coverage. If the facility were to experience a discharge that did enter any surface water in excess of numeric permit limits, such activity would constitute a permit violation.

In the event of a surface water discharge, the facility would be required to sample and monitor the discharge according to conditions as stated in Sections S4.A(1) and S4.D.(1)(2) of the draft permit. The only surface water body adjacent to the facility is a substantially bermed and concrete-lined irrigation canal that is located at an elevation that is higher than the CAFO production area. The regulations require a 100-foot buffer where land application of manure or process wastewater are prohibited adjacent to any surface waters. In the alternative, the regulations specify that a structural or

topographic feature that is adjacent to any surface water in land application areas may be present and so physically prevent field runoff from entering the surface water. In this case, the location and the elevation of the canal relative to the facility leads the agencies to conclude that it would be extremely unlikely that storm water runoff could enter the canal. In addition, the site is located in an interior drainage area with small catchment that would prevent facility discharges from entering surface waters. Any flooding or lagoon breach would not feasibly overtop the lowest pour points (the Columbia Improvement District Canal for the production area and much of the land application area; and the lower end of sand hollow, and interior drainage area which would receive any releases from the eastern land application area of the site).

The Permit prohibits the production area and land application areas from directly discharging any manure, process wastewater or contaminated storm water into the adjacent canal or any other surface waters. The Columbia River is over 9 miles to the north of the facility at its closes point. Butter Creek is over 8 miles to the east of the facility at its closest point. Due to the distance of the facility from these surface water sources and intervening topography, the agencies do not believe that any discharges from the facility would reach these surface waters.

The agencies do not believe that there could be any discharges from production area or land application into the canal. Because of the topography of the area where the facility is located, there are no over land flow paths from the production area and land application areas to the lined irrigation canals or any other surface waters. Using topographic mapping tools and a site visit, DEQ conservatively estimates that in order for a lagoon breach or storm event to cause flooding sufficiently to flow into the canal, surface water would have to accumulate to a depth of 6 feet on average (12 feet maximum) over an area of 1 square mile. That is, 3,840 acre-feet of water or, 1.25 billion gallons. The total lagoon volume, by comparison is 96.8 million gallons (1/13th of the pondable area). In terms of a storm event, the catchment area is small, less than 150 square miles. The agencies have determined that it is not feasible that flooding or wastewater could rise to a level that would impact surface water.

4. Some commenters expressed concern about the quantity of water being used by the dairy.

The agencies coordinated the Permit development and review with the Oregon Water Resources Department (OWRD) to ensure that the amount of legal water necessary to operate the facility and provide irrigation for the crop system will be available. The water use proposed by the facility is primarily derived from long-standing existing water rights that have always been used for agricultural crop production. Water used in a dairy production processes is reused several times and is ultimately collected in the process waste water system and used as crop irrigation water. OWRD is responsible for all water right activities and has reviewed the LVF Permit and AWMP for the dairy and crop system operations.

The dairy has proposed to transfer existing surface water rights to another landowner for their existing groundwater rights. The proposed transfer is conditioned to not increase the use of groundwater in the area. LVF will have to operate in compliance with any applicable statutes or rules governing water appropriation and use.

In addition, the agencies are conditioning the AWMP to limit the number of animals that may be confined on the facility to that number which may be sustained by presently available legal sources of water supply.

III. Water Quality NPDES Individual Permit Comments

Provided below are ODA and DEQ's response to the specific comments for the permit. The persons or organizations that provided comments are named in **bold** (or indexed numerically to the enclosed list of commenter names) followed by a summary of their comments. The Agencies' response is provided in *italics* immediately following each comment.

Say "No" to Factory Farms in Oregon (117-338)

1. Contamination of ground water through excessive application of manure in areas with compromised water quality. Environmental concerns.

Refer to general response: II. Responses to Recurring Themes (2).

Deny Willow Creek Dairy Water Pollution Permit (339-378)

1. Proposed use of 325 million gallons of water is as much water as 11,100 Oregonians use. Water should go to citizens to produce millions of pounds of fruit and vegetables to feed our people. Oregon in serious drought conditions, we cannot be wasteful with our water.

See response above addressing water supplies for the dairy. Under Oregon law, water used for agricultural uses is a beneficial use of water.

2. 30,000 cows will need to be fed, likely a heavy diet of corn and other grains that need fertilizer to grow. Both fertilizer and the 187 million gallons of manure runoff into our waterways. Runoff is rich in nutrients like nitrogen that end up causing an imbalance in water that leads to dead zones.

See responses above addressing surface water discharge. The individual NPDES CAFO Permit (Permit) proposed for this facility is designed to control all production area and land application area operations so that no discharge occurs to surface waters of the state and any discharge to groundwater does not exceed concentration limits.

Permit prohibitions, controls and monitoring designed to prevent runoff is further addressed in a preceding comment are further addressed in general response: II. Responses to Recurring Themes (2).

NGO Coalition (98): Food & Water Justice Program, Columbia River Keeper, Friends of Family Farmers, Northwest Environmental Defense Center, Oregon Physicians for Social Responsibility, Oregon Chapter Sierra Club, Friends of the Columbia Gorge, Humane Society of the United States, and Center for Biological Diversity

Initial comment period (8/4/16):

1. CAFO Pollution is a significant threat to Oregon's Waterways.

The agencies agree that CAFOs generate and must manage large quantities of potential pollutants and for those reasons have required LVF to obtain an NPDES CAFO Individual Permit. The Permit contains limitations and requirements that prevent specific discharges and protect both surface and ground waters of Oregon.

Also refer to general response: II. Responses to Recurring Themes (2).

2. Permit violates state laws and policies aimed at protecting people of color and low-income communities.

ORS 182.545(1) is the state statute that requires natural resource agencies to consider the effects of actions on under-represented communities, including people of color and low-income communities. ODA and DEQ complied with the statute, and the Environmental Justice (EJ) outreach plan and activity list are attached to the Permit Evaluation Report.

Specifically, the statute requires natural resource agencies to (1) consider the effects of actions on EJ issues, (2) hold hearings at times and locations that are convenient for affected communities, (3) engage in public outreach in the affected communities, and (4) create a citizen advocate position to encourage public participation, that the agencies consider EJ issues and inform the agency of the effect of its decisions on traditionally under-represented communities.

Based on the initial public comment and a request from the Oregon Environmental Justice Task Force, the agencies agreed to re-open the public comment period to enhance outreach with EJ concerns as a focus. During this period, the agencies received an additional 2,021 comments.

The agencies also used an EJ demographic data/query resource, EJSCREEN, phone calls and visits to community leaders to identify under-represented communities. It was determined that low income and Hispanic people constitute the minority and under-represented communities in the area, with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) also expressing EJ concerns. Combining both public comment intervals, the initial and enhanced public comment periods included the following:

- The Notice was published in the Hermiston Herald and the Eastern Oregonian newspapers, which are regional newspapers that would reach readers located in the area where the facility is proposed.*
- The agencies issued joint press releases to North Morrow County Times and 'tu decides' (bilingual newspaper).*
- The agencies posted the Notice to their respective web sites and to a listserv maintained by the Oregon State Library.*
- The hearing was held in Boardman (OR) where many EJ community members live.*
- The agencies consulted with the CTUIR on three occasions, and with CTUIR attended a meeting with the Oregon Environmental Justice Task Force.*
- The agencies tribal coordinators have reviewed the CAFO Program activities and how to interface with tribal nations in Oregon.*
- A bilingual presentation was made to the Hermiston's Hispanic Advisory Committee.*
- Managers and communication specialists of the agencies had numerous discussions with those whose representation may include the under-represented community: Capeco, Legal Aid, PCUN, Blue Mountain Community College worker training program, Umatilla County Housing Authority, United Farm Workers, local government planners, Farm Worker Program at the Oregon Law Center, city managers and mayors.*
- The agencies have positions with assigned Citizen Advocate duties.*

The agencies did look at the potential impacts from the facility and were able to draw some conclusions. Specifically, this assessment included:

- *Identifying the demographics near the site and communicating with Environmental Justice groups (low-income and Hispanic communities).*
- *Working with the Oregon Health Authority to identify potential threats to public water supplies.*
- *Assessing the proximity of residential homes and communities to the proposed dairy.*

To identify demographics, ODA and DEQ talked with people who commented on Environmental Justice issues, including local city and county officials and the Confederated Tribes of the Umatilla Indian Reservation. ODA and DEQ then used the [EJSCREEN](#) tool to look at the demographics of people living and working within a 9.3-mile (15 km) radius of the site. The EJSCREEN tool indicated that there are Hispanic and low income communities within this radius.

ODA and DEQ then held meetings to gather more information. Using a translator, the agency met with the Hermiston Hispanic Committee to discuss the proposal and the anticipated environmental impacts, including air and water quality impacts. The project was also discussed on a local Spanish radio station and bilingual flyers were distributed seeking input. ODA and DEQ did not receive any objections or hear of any concerns from disproportionately impacted groups related to the proposed project. Representation from the local dairy union and approximately 40 of the 70 individuals in attendance showed up from the Hispanic community in support for the project during the public hearing held on July 28, 2017. Many of the supporters described that the jobs and benefits created by the proposal would allow dairy workers and associated industries employees to participate more fully in their local communities.

*To determine potential threats to public water supplies, DEQ met with the Oregon Health Authority to identify any public water supply systems located in the vicinity of the proposed dairy. The dairy is located in the Lower Umatilla Basin Groundwater Management Area, where nitrate is the pollutant of greatest concern. The dairy would be a potential source of nitrates, thus contributing to groundwater contamination in the GWMA. The dairy poses a potential threat to both public and private drinking water supplies. There are 81 public water supply systems in the GWMA, and five of those are within a 10 miles of the Dairy. Three of those systems are located within a six-mile radius of the dairy, the distance from the Dairy to Interstate I-84. In addition to these public systems, there are many more private drinking water systems located in the GWMA. As the dairy is upgradient of a large part of the GWMA, any groundwater pollutants emanating from the dairy could potentially impact a broad area of the shallow aquifer within the GWMA. Within 9.3 miles (15 km) of the Dairy, 55% of people living in this area are Hispanic and the area is generally low income (**Table 5.4.3-1**).*

The third part of the analysis looked at houses and communities close to the dairy. DEQ used aerial imagery and mapping tools to measure straight-line distances from the dairy to the following communities: Boardman (6.6 miles), Irrigon (10.1 miles), Umatilla (15.1 miles), Hermiston (12.1 miles), Stanfield (15.9 miles) and Echo (15.8 miles). All of these communities are known to include populations of Hispanic and low-income people.

*Aside from those communities, DEQ found very few houses or dwellings located within a six-square-mile radius of the proposed dairy. Interstate 84 is six miles from the dairy, with scattered homes located along the interstate. The EJSCREEN results (**Table 5.4.3-1**) show per-capita income and Hispanic populations living within a 5, 10 and 15-kilometer radius.*

Table 5.4.3-1

| Distance from Dairy | % Hispanic | per capita income |
|-------------------------|------------|-------------------|
| 9.3 mile (15 km) radius | 55 | \$21,391 |
| 6.2 mile (10 km) radius | 15 | \$21,232 |
| 3.1 mile (5 km) radius | 0 | \$20,882 |

Table note: compare with Pendleton (\$45,930), Oregon (\$50,521), and the United States (\$53,482)

After communicating with locals and further assessing environmental impacts, ODA and DEQ recognize that the proposed dairy could disparately impact lower-income and Hispanic communities. ODA and DEQ determined that very few people live in close proximity to the site, which reduces the likelihood of people being negatively impacted by emissions and odors. As for groundwater concerns, the approach is to prepare a permit that sufficiently protects water quality and prevents groundwater and surface water contamination as discussed above. This is done through pollution controls, limits, groundwater monitoring and reliance on best management practices.

3. Permit is legally deficient:

- a. Lacks required surface water monitoring requirements.

Refer to the general response: II. Responses to Recurring Themes (3) which describes a low probability of wastewater runoff to surface water. Regardless of the low probability of such an event occurring, if the facility were to experience a discharge that did enter any surface water, it would be a permit violation. The numeric effluent limit for any surface water discharge is zero or the lab quantification limit based of the method of analysis. In the event of a surface water discharge, the facility would have to sample and monitor the discharge according to conditions in Sections S4.A(1) and S4.D.(1)(2) of the permit.

For further discussion of controls and associated monitoring, also refer to: II. Responses to Recurring Themes (2).

- b. AWMP is deficient and under protective of water quality.

The agencies are requiring the applicant to amend the AWMP to address the following concerns: Agencies will not allow any application of manure or process wastewater to soils that are frozen or snow covered. The applicant must remove all references of manure or process wastewater applications to frozen or snow covered soils from the AWMP.

Agencies will not allow any temporary storage or staging of solid manure in circle corners. The applicant must remove any reference to storing or staging solid manure in circle corners. AWMP must reflect that all solid manure must be stored only in designed and approved storage areas in the production area.

Agencies will not allow the lagoon storage facilities to have designed leakage rates or operate with a leaky liner. The applicant must remove any reference to any allowed lagoon liner leakage. The lagoon Operation and Maintenance documents must list how the leak detection system will operate and how the applicant will notify ODA in the event of a leak. The agencies will require that any detected leak be repaired and the facility restored to the design specifications.

Agencies require that the agronomic application rate calculation formula account for all sources of nitrogen and phosphorous applied to fields listed in the AWMP. The crop nutrient need calculation should include the expected crop yield (units) and the specific nutrient need per unit of crop yield. Total nutrient application calculation is (Units) of crop yield X (Pounds) of nutrient removed per unit of crop yield = agronomic application rate of nutrient in (Pounds). A nutrient source calculation is required to determine the amount of nutrients from all sources. Sources include, but are not limited to, plant available nutrients from manure or process wastewater application(s), plant available nutrients from commercial fertilizer, compost, or other soil amendments applied, plant available nutrients from soil and organic matter mineralization and plant available nutrients from irrigation water applications. Selected fields will have lysimeters installed immediately below the root zone, to monitor the soil water for nutrient content in the vadose zone. Feedback from this monitoring will result in more protective fertilization/irrigation measures, if needed.

The AWMP for this facility was developed with estimated numbers because actual test data is not available since the facility is not yet operable. ODA requires that the applicant analyze samples of manure and process wastewater as it is generated and must use those actual data to update the AWMP within 12 months of starting operations.

- c. Anti-degradation review is inadequate.

Surface water. The EQC anti-degradation policy and the Federal regulations that implement it only apply to surface waters, in terms of the requirement for an anti-degradation review [340-041-0004(1)]. Refer to: II. Responses to Recurring Themes (3) for an explanation of discharge prohibition and the topographic infeasibility of wastewater runoff to surface waters. The anti-degradation review sheet is used in conjunction with evaluation of a surface water discharge under an NPDES permit. DEQ's anti-degradation policy also emphasizes the prevention of groundwater pollution. For permitted facilities such as LVF, prevention of groundwater pollution is done by establishing concentration limits at down-gradient compliance wells at background water quality levels. This is addressed in the proposed permit and modifications associated with the public comments received.

Groundwater. While a formal anti-degradation review is not required for groundwater, OAR 340-040 includes requirements that groundwater not be degraded as well. Permit limits for monitoring wells target background so as to prevent degradation of groundwater. In addition, permit limits on leaching below the crop root zone and monitoring at this depth and leak detection of the lagoons, all support minimization of potential groundwater contamination. The waste storage lagoons must be constructed with double-lined synthetic material and will have a leak detection system to notify the operator if any leaks occur. The agencies require the operator to operate and maintain the lagoon system so that it does not leak. If a leak is detected, the operator must inform the agencies and repair the facility to restore it to a sealed system.

- d. Permit ignores Umatilla Basin Total maximum daily load (TMDL) requirements.

The Umatilla TMDL does not apply to this drainage area. The Umatilla TMDL applies to all waters in the Umatilla sub-basin (this is the topographic area of all potential drainage to the Umatilla River) that drain into the Umatilla River. The nearest tributary in the sub-basin is Sand Hollow to the east of LVF, topographically separating LVF from the Umatilla River and its tributaries. Sand Hollow is an interior drainage basin and does not flow to the Umatilla River hence; it was excluded from the Umatilla TMDL, as are any waters to the West of Sand Hollow.

- e. Must prohibit practices known to threaten WQ.

Refer to general response: II. Responses to Recurring Themes (2)

- f. Lacks required reasonable potential analysis.

Reasonable Potential Analysis required. This analysis is an assessment of whether pollutant discharges to waters of the United States have the potential to cause or contribute to exceedance of water quality standards in the receiving surface water body. This requirement applies only when ODA and DEQ determine that there will be a point source discharge of pollutants to surface waters. Oregon's CAFO statutes (ORS 468B.050(1)(d) prohibit such discharges. The proposed permit prohibits any surface water discharge from the facility except in the event of a specified storm and then that discharge cannot cause a violation of numeric standards for nitrogen and bacteria set in the Permit. WQBEL development referenced in EPA's NPDES Permit Writers Manual for CAFOs was written for states that authorize CAFOs to regularly discharge to waters of the US.

- 5. Permit groundwater controls and monitoring are inadequate.

Refer to general response: II. Responses to Recurring Themes (2)

- 5. Proposed water withdrawals are unreasonable.

Refer to general response: II. Responses to Recurring Themes (4)

- 6. Fact sheet (PER) discussion of compliance history is inadequate.

Lost Valley Ranch is a newly proposed facility, thus there is no compliance history established at this site. The applicant currently operates a permitted, leased dairy facility in Oregon and ODA has inspected that facility 27 times since 2001. The inspections resulted in 19 Facility in Compliance outcomes, 6 Water Quality Advisory outcomes and 2 Notice of Non Compliance outcomes. The applicant and the facility owners have been responsive in returning the facility back to compliance. The PER was updated with this response.

NGO Coalition (98) Food & Water Justice Program, Columbia River Keeper, Friends of Family Farmers, Northwest Environmental Defense Center, Oregon Physicians for Social Responsibility, Oregon Chapter Sierra Club, Friends of the Columbia Gorge, Humane Society of the United States, and Center for Biological Diversity with Center for Food Safety, Water Watch of Oregon, Humane Oregon, Socially Responsible Agricultural Project

Extended Comment Period (11/4/16):

- 1. Permit warrants U.S. EPA Oversight

Under EPA's oversight authority, EPA may review, comment upon or object to draft NPDES permits. Specifically 40 CFR 123.44 outlines the procedures and requirements for EPA review and

objection to State permits. In addition, the National Pollutant Discharge Elimination System Memorandum of Agreement between the State of Oregon and United States Environmental Protection Agency Region 10 (MOA) provides for a process for EPA's informal review of permit documents. Under 40 CFR 123.44 and the MOA, it is clear that EPA has the discretion to review, comment upon and object to NPDES permits; it is not required to do so. With regard to the current permit, while EPA has not formally commented upon or objected to the permit, EPA has seen the draft permit and both ODA and DEQ have consulted with EPA during its development.

2. DEQ and ODA have discretion to deny NPDES Permit and should exercise it in this case.

ODA and DEQ determined that a permit can be issued consistent with applicable statutes and regulations in ORS 468B.015, 468B.020, 468B.155, 468B.160 and 468B.215. The agencies have developed a permit that contains conditions that would achieve compliance with applicable regulatory standards. The agencies have determined that the permittee would be reasonably able to comply with the permit conditions.

3. Additional concerns about groundwater contamination.

a. Changes in land use pose a particular threat to groundwater quality at this site.

The agencies rely on the County's Land Use Compatibility Statement determination that the proposed land use is consistent with local plans and local land use regulations. OAR 340-018-0050. The facility siting is not a change in land use as the proposed production area and all land application areas are currently zoned Exclusive Farm Use (EFU) and have been since 1972. A dairy operation is an outright permitted use in the EFU zone. The land application area of the proposed operation has a long history of growing irrigated, agricultural crops such as alfalfa, vegetables, and trees. The poplar trees that were previously grown on the site are defined as an agricultural crop in Oregon. The poplar farms previously on site required very little applied nitrogen fertilizer. The CAFO permit requires protection of water quality.

b. Groundwater discharge limitation must be set at 0 or cumulative impact analysis conducted.

Oregon groundwater rules [340-040-0030 (3)(b)] specify "Concentration Limit at New Facilities: The permit-specific concentration limits at new facilities shall be established at the background water quality levels for all contaminants. Accordingly, interim numeric concentration limits are included in the permit for groundwater monitoring wells, and as additional sites and data are available (see previous responses) refined limits will be required and ultimately, after nine quarters of monitoring, final numeric limits will be established for down-gradient wells, based on background.

The calculated concentration limits for groundwater monitoring wells will be based on 'no increase above aquifer background concentrations' with emphasis on nitrate.

Also see response: II. Responses to Recurring Themes (6)

c. Not a zero discharge permit and land application will violate Oregon law.

The LVF does not propose to discharge to any surface waters in that it does not have any conveyance or pipe that discharges directly into surface waters. This is a CAFO facility and not a typical continuously discharging facility that requires NPDES Permit coverage. If the facility were to experience a discharge that did enter any surface water, as evidenced by the presence of specified indicator parameters at concentration limits above the limit of quantitation, it would be a permit violation.

In the event of a surface water discharge, the facility would have to sample and monitor the discharge according to conditions in S4.A(1) and S4.D.(1)(2) The only surface water body adjacent to the facility is an irrigation canal that is located at an elevation that is higher than the CAFO production area which makes it impossible for storm water runoff to enter the canal. A 100-foot buffer where land application of manure or process wastewater is prohibited or a structural or topographic feature that would prohibit field runoff from entering the surface water is required adjacent to any surface water in land application areas.

4. The draft permit does not adequately address surface water impacts.

a. LVR will likely discharge to surface water via groundwater.

The permitting Agencies agree with this comment. Any nitrate leaching from the facility would enter groundwater, and in terms of concentrations, must comply with the permit and groundwater protection rules (OAR 340-040-0030). Not only must leaching be minimized in accordance with the permit but, groundwater limits are established so as not to increase aquifer contaminant concentrations.

Undoubtedly, nitrate from the surrounding GWMA will enter the Columbia and Umatilla Rivers. The Columbia River is the northern boundary of the GWMA and the lower Umatilla River is in the GWMA. Fortunately, the influence of groundwater nitrate on these rivers is undetectable. For instance, long term monitoring of the length of the Umatilla River reveals that nitrate concentrations in the river increase downstream to Hermiston and then decrease downstream from river mile 8. The GWMA boundary is at river mile 35. Through the first 20 miles of GWMA, river concentrations range from non-detect to 1.7 mg/l. At river mile 8, concentrations range from non-detect to 6.9 mg/l. Below this, the river ranges from 0.27 to 4.3 mg/l. This is not at an expected pattern if the GWMA was controlling nitrogen concentrations in the river. The Columbia River nitrate is generally at undetectable concentrations, and has orders of magnitude more flow than the Umatilla River, providing a vast capacity to assimilate groundwater nitrate without adversely affecting beneficial uses.

b. LVR will likely discharge to surface water via nitrogen deposition.

Regarding deposition from the air, there are no state or federal air quality permit requirements for dairy farms to control or regulate air emissions of nitrogen. For water, the proposed water quality Permit does require monitoring of soil, surface waters and groundwater adjacent to and under the proposed facility and prohibits discharges to surface waters.

5. Additional concerns about the draft AWMP.

a. AWMP does not comply with federal regulations.

The agencies are requiring the applicant to amend the AWMP to address the following concerns:

-Agencies will not allow any application of manure or process wastewater to soils that are frozen or snow covered. The applicant must remove all references of manure or process wastewater applications to frozen or snow covered soils from the AWMP.

-Agencies will not allow any temporary storage or staging of solid manure in circle corners. The applicant must remove any reference to storing or staging solid manure in circle corners. AWMP must reflect that all solid manure must be stored only in designed and approved storage areas in the production area.

Agencies will not allow the lagoon storage facilities to have designed leakage rates or operate with a leaky liner. The applicant must remove any reference to any allowed lagoon liner leakage. The lagoon Operation and Maintenance documents must list how the leak detection system will operate and how the applicant will notify ODA in the event of a leak. The agencies will require that any detected leak be repaired and the facility restored to the design specifications.

Agencies require that the agronomic application rate calculation formula account for all sources of nitrogen and phosphorous applied to fields listed in the AWMP. The crop nutrient need calculation should include the expected crop yield (units) and the specific nutrient need per unit of crop yield. Total nutrient application calculation is: (Units) of crop yield X (Pounds) of nutrient removed per unit of crop yield = agronomic application rate of nutrient in (Pounds). A nutrient source calculation is required to determine the amount of nutrients from all sources. Sources include, but are not limited to, plant available nutrients from manure or process wastewater application(s), plant available nutrients from commercial fertilizer, compost, or other soil amendments applied, plant available nutrients from soil and organic matter mineralization and plant available nutrients from irrigation water applications. Selected fields will have lysimeters installed immediately below the root zone, to monitor the soil water for nutrient content in the vadose zone. Feedback from this monitoring will result in more protective fertilization/irrigation measures, if needed.

Agencies require that the timing of manure and process wastewater applications be listed in the AWMP.

Agencies require that the operation of the facility be limited to only the number of animals that may be sustained by presently available legal sources of water supply and to inform the agencies at permit issuance on the quantity of presently available legal sources of water supply and the number of animals that may be sustained. Operation would also have to inform the agencies if any change in water source or amount occurs.

- b. Additional recommendations for groundwater monitoring plan (establish robust groundwater baseline prior to beginning operations).

The agencies are requiring an additional 7 groundwater-monitoring wells to be installed. A total of 11 groundwater-monitoring wells will be sampled and the data used to determine compliance with groundwater concentration limits. The agencies will require a re-submission of the Hydrologic Characterization Report after the data from the additional monitoring wells has been analyzed. The agencies will require a re-submission of the Monitoring Plan that includes monitoring the additional groundwater wells.

6. Draft Permit lacks Best Professional Judgment (BPJ) limits for pollutants of concern.

Refer to general response: II. Responses to Recurring Themes (1)

Ivan Mulaski, Friends of Family Farmers (96)

1. Proximity to other large dairies and cumulative impacts

The agencies considered the cumulative impact of CAFOs in the area where the proposed dairy would be located. All of the existing adjacent CAFOs are registered to CAFO Permits that prohibit discharge to surface waters that would cause or contribute to any water quality violation and cannot have any discharge that exceeds ground water concentration limits. The surface water discharge limitations for all of the existing dairies is zero (surface discharge is prohibited). There are currently no regulations or

limits that the agencies could consider on the number of human or animal residents locating into the LUBGWMA. Impacts to the GWMA include the cumulative impacts of wastewater land application, conventional agriculture, municipalities and other sources of aquifer nitrate loading. This is being addressed in several ways including the following: first, when issuing or renewing wastewater permits in the GWMA, including Lost Valley, the permits are prepared to be protective of groundwater, second, the ongoing GWMA Committee and DEQ, OSU and ODA specialists view the GWMA as a whole, and promote best management practices throughout. In addition, new research into GWMA-specific agronomic rates is being requested and the agencies are working with irrigation water users and agricultural operations to promote implementation of new promising technologies for aquifer water quality improvement.

2. Construction commencing prior to permit issuance.

ODA conducted a compliance inspection and determined that parts of the facility were already constructed that required the CAFO Permit issuance. Accordingly, ODA issued a Water Quality Advisory (WQA), #1626609 on November 1, 2016, that required the operator to cease construction on any part of the facility that is used to treat or store manure or process wastewater until the CAFO Permit has been issued. ODA and DEQ will conduct site inspections during the construction phase for specific waste storage facilities. ODA has conducted a follow up inspection #1726621, on January 24, 2017 and determined that the operator was complying with the WQA and that no animals were present and no animal waste or process wastewater was being generated at the facility.

3. AWMP does not contain enough specificity on surface and groundwater protections.

The protections for surface and groundwater are contained in the Permit. Also, refer to the general response: II. Responses to Recurring Themes (2); regarding protections and Section IV for changes to the permit resulting from public comment.

4. ODA should not approve permit before all documents are made available for public review.

The agencies provided all of the required documents for public review during the public notice and comment period that ran from June 28, 2016 to November 4, 2016.

5. Anaerobic digester details and requirements for construction needed.

LVF is not planning on installing or operating a digester at this time. If LVF does propose a digester at a future date, they will need to submit a construction approval request that includes a complete design package. The agencies would review the proposal and need to approve it prior to construction. If the digester project utilized an internal combustion engine to generate electricity, it would require an air quality permit from DEQ for the engine combustion emissions.

6. GW concentration limits should be set before construction is allowed or permit is issued.

Refer to NGO Coalition (98), response number 3b (pg. 15)

7. ODA has a direct legal obligation to analyze and disclose potential economic impacts on Oregon Agriculture and risks to family scale dairy operations.

Any analysis and disclosure of potential economic impacts to Oregon agriculture are beyond the scope of the proposed NPDES CAFO Individual Permit.

Morrow County (38)

1. Compliance with all applicable local land use requirements.

While land use comments are beyond the scope of the proposed NPDES CAFO Permit, the agencies could not issue a CAFO permit to the facility without it first obtaining land use approval. The following response is provided to describe the interaction of land use with the proposed CAFO Permit. The applicant submitted a Land-Use Compatibility Statement (LUCS) that was completed and approved by Morrow County Planning Department stating the proposed dairy facility was an outright permitted use in the EFU zone. The facility siting is not a change in land use as the proposed production area and all land application areas are currently zoned Exclusive Farm Use (EFU). A dairy operation is an outright permitted use in the EFU zone. The land application area of the proposed operation has a long history of growing irrigated, agricultural crops such as alfalfa, vegetables, and trees. The poplar trees that were previously grown on the site are defined as an agricultural crop in Oregon.

The agencies expect that the applicant will comply with any other local building permit or other construction code permit requirements once a CAFO Permit is issued.

2. New dairy in LUB GWMA increases nitrogen loading.

Refer to general response: II. Responses to Recurring Themes (2)

3. Water quantity and water use concerns for a new facility in critical groundwater area.

Refer to general response: II. Responses to Recurring Themes (4)

4. Impact of new dairy to adjacent Columbia Improvement District canal. Impact of potential lagoon failure to infrastructure and water quality.

The elevation of the canal is much higher than the elevation of the top of embankment for any of the proposed lagoons. The lagoons are located at the lowest point of the site and if a lagoon was to overtop, the liquid would not travel uphill toward the canal. The lagoons designs include double poly liners with leak detection systems so that no manure or process wastewater seeps into groundwater or into the canal. The lagoons must have liquid level gauges that are monitored and recorded weekly so that lagoon overflows do not occur. The lagoon complex and all waste collection, transfer and utilization structures must be inspected weekly, the condition recorded and repairs made to keep the systems functional. The permittee must report any Permit non-compliance or anticipated non-compliance to the agencies. For further information, refer to NGO Coalition (98) response 3c (pg. 15), and general response: II. Responses to Recurring Themes (3).

Brian Posewitz, Humane Oregon (101)

Concerns about water quality impacts.

Refer to general response: II. Responses to Recurring Themes (2)

Petition #1 - Initial Comment Period (378-2245)

Petition signed by 1,868 individuals containing concerns of water quality and water quantity impacts.

1. Water Quality:

Also refer to general response: II. Responses to Recurring Themes (2)

2. Water Quantity:

Refer to general response: II. Responses to Recurring Themes (4)

Sarah Hanneken (112)

A. Yakima Valley, WA, Cow Palace Dairy and groundwater contamination.

Unlike the Yakima Valley, WA, Cow Palace case, Oregon requires all dairies with grade “A” milk licenses to obtain and operate under a CAFO Permit. The agencies are requiring the proposed dairy to obtain and operate under an Individual NPDES CAFO Permit that contains stringent requirements for ground water protection and prohibits surface water discharges from the facility. Specific Permit requirements are that all manure and process wastewater lagoons will be double lined with synthetic material and have a leak detection system installed. 11 groundwater-monitoring wells will be installed and monitored quarterly for multiple constituents to determine if the facility operations are impacting groundwater.

B. Environmental and social justice/Environmental Justice issues (as a result of groundwater contamination).

Refer to response of Section III. Water Quality NPDES Individual Permit comments, NGO Coalition (98), comment number 2.

C. Lagoon discharge of 3.7 million gallons annually.

DEQ requires that wastewater lagoons are designed to criteria of less than 10^{-6} cm/s leakage rate and a calculated specific discharge. The required design of the LVF lagoon is much more protective than this because the process wastewater storage lagoons must be constructed with a double lining of synthetic material and equipped with leak detection system. Any leakage from the liner would be caught in a double-liner envelope where it would have none of the leakage pressure of the inner liner and would be detected and the leak repaired. The Engineer of Record did calculate a liner leakage in the event of liner failure, but the process waste storage facilities are not allowed to leak or discharge to groundwater. The agencies will require that it be repaired. Part of the reason for plural lagoons is a redundancy measure to enable de-watering of a leaking lagoon for repair. The agencies require that the permittee operate and maintain the lagoon system so that it does not leak. If a leak is detected, the permittee must report that to the agencies and repair the liner to restore it so that no leakage occurs so that any leak will be detected and repaired so that waste from storage facilities cannot enter into groundwater.

D. Nitrate contamination of surface and ground waters due to soil characteristics.

The agencies will require the operator to install and sample groundwater-monitoring wells and not exceed concentration limits set by the agencies based on calculations of data collected in up and down-gradient monitoring wells. A total of 11 monitoring wells are proposed. The groundwater-monitoring plan will require quarterly monitoring for a suite of chemical, biological and physical metrics. The groundwater-monitoring network results will be used to evaluate if the production area and land application areas are meeting the permit requirements. Selected fields will have lysimeters installed immediately below the root zone, to monitor the soil water for nutrient content in the vadose zone. Feedback from this monitoring will result in more protective fertilization/irrigation measures, if needed, before groundwater is impacted.

Robert C. Lothrop, Columbia River Inter-Tribal Fish Commission (2295)

Magnitude of waste production concerns group from a water quality and fish protection standpoint. Opposes facility as at odds with Columbia River fishery goals.

The only surface water adjacent to the proposed production area is an irrigation canal that is located at the elevation that is higher than any of the production area and most of the land application area. The Permit prohibits the production area and land application areas from directly discharging any manure, process wastewater or contaminated storm water into the canal or any other surface waters.

The agencies will require the operator to install and sample groundwater-monitoring wells and not exceed concentration limits set by the agencies based on calculations of data collected in up and down-gradient monitoring wells. A total of 11 monitoring wells are proposed. The groundwater-monitoring plan will require quarterly monitoring for a suite of chemical, biological and physical metrics. The groundwater-monitoring network results will be used to evaluate if the production area and land application areas are meeting the permit requirements.

Also refer to general response: II. Responses to Recurring Themes (2)

Kate Ely, Confederated Tribes of the Umatilla Indian Reservation (2298)

1. Facility to be located in GWMA with documented high nitrates in GW.

Refer go general response: II. Responses to Recurring Themes (2)

2. Zero discharge standard questions.

OAR 340-040-0001 establishes groundwater protection requirements for permits. The Permit prohibits discharges to surface waters, except during a flood of specified magnitude or greater occurs (1 in 25 year probability of a 24 hour design storm), and in normal and design storm conditions, any surface discharge is limited to the following: The Permit contains numeric Effluent Limits for any surface water discharge that may occur to the quantitation limits of 0.1 mg/L of nitrate and 2 cfu/100 ml for bacteria (cfu-colony forming units). Any discharge to groundwater must not to exceed the background concentration limits set by the agencies. Refer to response to comment by NGO Coalition (8/4/2016), comment number 3c, page 13; NGO Coalition comments numbered 3b and 3; and general responses: II. Responses to Recurring Themes (2) and (3).

3. Site assessment and proposed monitoring plans are not satisfactory.

The permitting agencies agree with this comment. The agencies are requiring a re-submission of the Monitoring Plan that includes monitoring the additional groundwater wells.

4. Request additional monitoring well locations.

The permitting agencies agree with this comment. The agencies are requiring an additional 7 groundwater-monitoring wells to be installed. A total of 11 groundwater-monitoring wells will be sampled and the data used to determine compliance with groundwater concentration limits.

5. Hydrologic Characterization Report must accurately describe GW under the site.

The permitting agencies agree with this comment. See response in #4 above. The data from the 7 additional groundwater-monitoring wells will allow the site to be adequately characterized. The agencies will require a re-submission of the Hydrologic Characterization Report after the data from the additional monitoring wells has been analyzed.

6. Need adequate baseline up gradient well monitoring results.

The permitting agencies agree with this comment. The applicant has developed more wells to address the land application area, and is collecting baseline data and will continue to do so for the first six months of operations, while filling lagoons rather than irrigating crops with wastewater.

7. Monitoring plan needs additional work.

The permitting agencies agree with this comment. The agencies will require a re-submission of the Monitoring Plan that includes monitoring the additional groundwater wells.

8. Concerned about construction proceeding without issuance of Permit.

ODA conducted a compliance inspection and determined that parts of the facility were already constructed that required the CAFO Permit issuance. Accordingly, ODA issued a Water Quality Advisory, #1626609 on November 1, 2016, that required the operator to cease construction on any part of the facility that is used to treat or store manure or process wastewater until the CAFO Permit has been issued. ODA and DEQ staff will conduct site inspections during the construction phase for specific waste storage facilities. ODA conducted a follow up inspection #1726621 on January 24, 2017 and determined that the operator was complying with the WQA and that no animals were present and, no animal waste or process wastewater was being generated at the facility.

Animal Legal Defense Fund (2297)

1. ODA lacks authority to issue permit

DEQ is the NPDES Permit authority in Oregon and ODA and DEQ jointly cooperate to develop and issue NPDES CAFO Permits and have done so since 2003. All CAFO NPDES General and Individual Permits are signed by both agencies. ODA and DEQ operate the program under a Memorandum of Understanding that details the roles and responsibilities of each agency.

2. Pollutants

Refer to general response: II. Responses to Recurring Themes (2)

3. 3.7 million gallons lagoon leakage

DEQ requires that wastewater lagoons are designed to criteria of less than 10^{-6} cm/s leakage rate with a calculated specific discharge amount per unit of time. The required design of the LVF lagoon is more protective than this because the process wastewater storage lagoons must be constructed with a double lining of synthetic material and equipped with leak detection system. Any leakage from the liner would be caught in a double-liner envelope where it would have none of the leakage pressure of the inner liner and would be detected and the leak repaired. The Engineer of Record did calculate a liner leakage in the event of liner failure but the process waste storage facilities are not allowed to leak or discharge to groundwater. The agencies will require that any leaks be repaired. Part of the reason for plural lagoons is a redundancy measure to enable de-watering of a leaking lagoon for repair. The agencies require that

the permittee operate and maintain the lagoon system so that it does not leak. If a leak is detected, the permittee must report that to the agencies and repair the liner so that no leakage occurs. The leak detection systems must be maintained and repaired as necessary to prevent waste from storage facilities from entering into groundwater.

4. NPDES Program limitations preclude issuance, law requires ODA to deny.

The commenter asserts that the permit may not be issued because of two prohibitions in 40 CFR 122.4. Subsection (d) prohibits the issuance of an NPDES permit when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected states. The agencies are assuring compliance with 40 CFR 122.4 by prohibiting discharge to navigable waters and demonstrating compliance with OAR 340-040 via a monitoring well network and numeric concentration limits.”

Deny the Lost Valley Ranch water pollution permit and stop new mega-CAFOs in Oregon (3815-3913)

1. Water quantity concern. Proposed dairy estimates use of 25 million gallons of water every year.

Refer to general response: II. Responses to Recurring Themes (4)

2. Water quality concern. 187 millions of gallons of manure will run off into waterways.

Refer to general response: II. Responses to Recurring Themes (2)

Oppose pollution permit for new dairy factory farm (3914-4031)

Pollution to water.

Refer to general response: II. Responses to Recurring Themes (2)

Petition #2 (4032-4280)

Water quality concerns.

Refer to general response: II. Responses to Recurring Themes (2)

Comments in Support of Permit

Tami Kerr, Oregon Dairy Farmers Association (99 & 2299)

Supports application for CAFO Permit and CAFO Program.

Thank you for the comment.

Donnie Jenck (2289)

Supports LVR project.

Thank you for the comment.

John Fazio (See #71)

Provided technical comments in support of the Permit issuance.

Thank you for the comment.

Ed Rollins (2260)

Supports issuance of the LVR permit

Thank you for the comment.

Bill Brewer (2271)

Supports proposed dairy. Wonderful use of land.

Thank you for the comment.

Mark Morgan (2275)

In support of LVR's CAFO Permit.

Thank you for the comment.

Vic Van Slyke (25)

Provided resource on reducing freshwater by extracting water from manure

Thank you for the comment.

Mary Anne Nash, Oregon Farm Bureau (2299)

In support of LVR permit.

Thank you for the comment.

George Chadwick (71)

Provided technical information in support of LVR permit.

Thank you for the comment.

IV. Summary of changes to the NPDES Individual Permit

The narrative groundwater permit limit of the draft permit will be replaced with interim numeric concentration limit(s) and followed with values based on increased number of monitoring wells and numbers of sampling events, with final limits established after nine quarters of data are available. Background data is gathered from sources up gradient or otherwise unaffected by the facility. All down-gradient wells with have numeric limits calculated based on background concentrations, such that there is no increase in concentration between upgradient to downgradient wells. This is described in Permit Condition S5.C.

In addition, prior to placing the facility into service or commencing land-application, the permit holder shall amend the Animal Waste Management Plan as follows:

Add the requirement for additional information in the Agronomic Rate definition. Application rates and timing will be adjusted as needed based on information from water samples collected monthly just below the root zone and from soil sample results.

Remove all reference to manure or process wastewater applications to frozen or snow covered soil.

Add shallow vadose zone water monitoring requirements.

Remove all references to stockpiling manure in circle corners.

The agencies removed a reference that allows for a Concentration Limit Variance from the permit because it is not applicable to new facilities.

The agencies require the addition of, at a minimum, 7 wells to monitor the land application area.

The agencies require that the operation of the facility be limited to only the number of animals that may be sustained by presently available legal sources of water supply and to inform the agencies at permit issuance on the amount of the presently available legal sources of water supply and the number of animals that may be sustained. Operation must also inform agencies if any change to water source or amount occurs during the life of the permit.

V. Index of Commenters

- Oral Commenters during the July 28, 2016 Hearing – Recording available upon request
 - Wayne Downing
 - Marty Myers
 - Carla Mclane
 - Victoria Rudy
 - Tom Hagerud
 - Luke Dynes
 - Jill Parker
- Form Letters –
 - Deny Mega Dairy (39)
 - Deny the Lost Valley Ranch water pollution permit and stop new mega-CAFOs in Oregon (99)
 - Say “No” to Factory Farms in Oregon (222)
 - Oppose pollution permit for new dairy factory farm (118)
 - Reject Permit for Lost Valley Ranch Dairy CAFO (1515)
 - Petition #1 (1868)
 - Petition with comments (7) supplemental document to the above petition that provided individual comments
 - Petition #2 (249)
- Individual Comments (156) – See Attachment #1