

Department of State Lands

775 Summer Street NE, Suite 100 Salem, OR 97301-1279 (503) 986-5200 FAX (503) 378-4844 www.oregon.gov/dsl

State Land Board

STATE LAND BOARD

August 9, 2022 10:00 am – Noon In-Person at the South Slough Reserve Visitor Center 61907 Seven Devils Road, Charleston and by Zoom Video/Audio The meeting video will be livestreamed on the Department of State Lands YouTube Channel Kate Brown Governor

Shemia Fagan Secretary of State

> Tobias Read State Treasurer

AGENDA

Consent Items

- 1. Request for approval of the minutes of the June 14, 2022, State Land Board Meeting.
- 2. Clatsop County Bridge Easement

Informational Items

3. Abandoned and Derelict Vessels Update No public testimony will be taken on this item.

Action Items

- 4. Oregon Ocean Science Trust Appointment Public testimony will be accepted on this item.
- 5. Willamette River Channel Quitclaim Deed Exchange *Public testimony will be accepted on this item.*
- 6. Klamath Forestlands Decertification *Public testimony will be accepted on this item.*

7. Other

Meeting video will be livestreamed, and the video recording available after the meeting, on the DSL YouTube Channel: <u>https://www.youtube.com/channel/UCQA7FHTWwl-gjJkQeYPJ1IA</u>

Attending the State Land Board Meeting

This meeting will be held in a facility that is accessible for persons with disabilities. If you need assistance to participate in this meeting due to a disability, please notify Arin Smith at arin.n.smith@dsl.oregon.gov at least two working days prior to the meeting.

Visitors are **NOT permitted to bring backpacks, bags, or large purses** into the South Slough Reserve Visitor Center prior to, during, or following the Land Board meeting. Purses, medical bags, and diaper bags are permitted, but may be subject to inspection by the Oregon State Police.

Public testimony information can be found on the next page.

Providing Public Testimony

The State Land Board places great value on information received from the public. The public may provide written or spoken testimony regarding consent and action agenda items, time permitting and at the discretion of the Chair.

- **Providing Written Testimony:** Written testimony may be submitted at <u>landboard.testimony@dsl.oregon.gov</u>. Testimony received by 10 a.m. the day before the meeting is provided to Land Board members in advance and posted on the meeting website. Testimony received after this deadline may not be provided to the Land Board prior to a vote. Please indicate the agenda item your testimony relates to.
- **Providing Spoken Testimony by Video/Phone or In Person:** The signup deadline to provide spoken testimony during meetings is 10 a.m. the day before the meeting. You may sign up to provide testimony by video/phone or in person. Signup information is posted on the <u>Land Board Meetings website</u> one week prior to the meeting. After signing up, you will receive a confirmation email containing additional information.

Additional Testimony Information

- Testimony on action items is taken during the item's presentation, before the Land Board votes. Please review the meeting agenda and be present and prepared to provide testimony at the appropriate time.
- The Board typically accepts testimony on consent and action items only.
- The standard time limit is three minutes for each individual; the actual time available for testimony during Land Board meetings is at the discretion of the Chair.
- Be aware that there may not be time for everyone who signs up to provide testimony.
- The Board may not be able to accept testimony on items for which a formal comment period has closed, such as a rulemaking comment period. The meeting agenda indicates whether testimony will be accepted on an item.



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The State Land Board (Land Board or Board) met in regular session on June 14, 2022, in the Land Board Room at the Department of State Lands (DSL), 775 Summer Street NE, Salem, Oregon. The meeting audio and video was livestreamed on the DSL YouTube channel.

Present were: Kate Brown Shemia Fagan Tobias Read – via Zoom

Governor Secretary of State State Treasurer

Governor's Office

<u>Land Board Assistants</u> Jason Miner Molly Woon Ryan Mann – via Zoom

Department StaffVicki WalkerBill RyanArin SmithJean Straight

Secretary of State's Office State Treasurer's Office

Liane O'Neill Ted Bright Ali Ryan Hansen Linda Safina-Massey

Department of Justice Matt DeVore

Governor Brown called the meeting to order at 10:00 a.m. The topics discussed and the results of those discussions are listed below. To view the Land Board (Board) meeting in its entirety, please visit our YouTube page: June 14, 2022 Land Board Meeting

Consent Items

1. Minutes

Secretary Fagan made a motion to approve the minutes for the April 12, 2022, Land Board meeting.

Treasurer Read seconded the motion. The item was approved at 10:02 a.m.

Action Items

2. Delegation of authority related to use of state lands for Portland Harbor Superfund Site remediation and restoration activities

Director Walker introduced Oregon Assistant Attorney General Matt Devore who gave an overview and quick background of the item. Treasurer Read requested language be added to the delegation regarding the Director updating the Land Board members at important decision points.

The Department recommended the State Land Board delegate to the Director of the Department the authority to negotiate and reach agreements with Potentially Responsible Parties, federal, state and local government entities, or any other interested party regarding the compensation due to the State, and any other applicable requirements, for the use of state lands, in order to facilitate remediation and restoration activities on lands under the State Land Board jurisdiction within the Portland Harbor Superfund Site as specified in the attached delegation of authority document.

Treasurer Read made a motion to approve the action item. Secretary Fagan seconded the motion. The item was approved at 10:11 a.m.

3. Request to Initiate Rulemaking to Restrict Public Use at N. Hayden Island Deputy Director Bill Ryan joined Director Walker at the table to present this item.

The Department has received numerous reports from local law enforcement, emergency services, and the Portland Harbor Master of activities associated with unauthorized camps that are seriously impacting the safety and health of the riverbank and river, as well as the nearby community.

The Department recommended the State Land Board authorize the Department to initiate rulemaking to impose permanent restrictions on public use of approximately 500 yards of the bank of the Columbia River along the north side of Hayden Island, between river mile 106 and 107.

Public comment was taken.

Comments and questions were taken from Treasurer Read and Secretary Fagan.

Treasurer Read made a motion to approve the action item. Secretary Fagan seconded the motion. The item was approved at 10:35 a.m.

4. Department of State Lands Budget Request

Deputy Director Jean Straight joined Director Walker at the table to present this item.

The Department of State Lands recommended the State Land Board approve submission of the Department's 2023-2025 budget, including Policy Packages 101-112, to the Department of Administrative Services

Governor Brown asked a question regarding abandoned and derelict vessel cleanup. A robust conversation followed regarding the timeline and cost, including requesting general funds from the legislature to cover those costs to reduce the impact on the common school fund.

Chair Brown made a motion to direct the Department to:

• Move forward with the immediate cleanup of the three critical vessels.

- Seek reimbursement from the E-Board for the costs of those cleanups.
- Report back to the Board at the August meeting with an action plan.
- Add a POP to the Department's budget requesting \$40M in general funds to complete ADV cleanup.

Treasurer Read seconded the motion. The item was approved at 11:12 a.m.

Secretary Fagan made a motion to approve the original action item, the Department's 2023-2025 budget.

Treasurer Read seconded the motion. The item was approved at 11:14 a.m.

5. Department of Forestry Budget Request

Director Walker invited Oregon Department of Forestry representatives to present this item.

Deputy State Forster Kyle Abraham, State Forests Deputy Division Chief of Planning Ron Zilli, and State Forests Asset Unit Manager Kevin Boyd presented their agency request budget.

The Department of Forestry and the Department of State Lands recommended the State Land Board approve the submission of ODF's 2023-2025 Current Service Level Common School Fund Budget to the Department of Administrative Services as part of the Department's total budget, with recognition that there may be policy option packages that could cause changes to ODF's Agency Request Budget, although none are known at this time.

Secretary Fagan made a motion to approve the action item. Treasurer Read seconded the motion. The item was approved at 11:22 a.m.

Informational Items

6. ODF – Western Oregon State Forests Habitat Conservation Plan 11:22 a.m.

Director Walker invited HCP Project Manager Cindy Kolomechuk, and Project Director for Eco Northwest Sarah Reich to present this item.

7. Real Estate Asset Management Plan (REAMP) Update

11:32 a.m.

Deputy Director Bill Ryan gave an overview of the REAMP update.

8. Marbled Murrelet Management Plan

11:44 a.m.

Director Walker gave a very brief overview of the plan.

9. Strategic Plan Update

11:45 a.m.

Director Walker introduced Ali Ryan Hansen, DSL's Communications Manager, to present the Strategic Plan update.

Questions were taken from Treasurer Read.

Deputy Director Bill Ryan gave a brief overview of the Wetland and Waterway Program costs.

The next Strategic Plan update will be presented at the October Land Board meeting.

10. Oregon Renewable Energy Siting Assessment (ORESA) Project Update 12:00 p.m.

Director Walker invited the Oregon Department of Energy (ODOE) to present this item.

Janine Benner, Director of ODOE gave opening remarks.

Associate Director of Strategic Engagement & Development Ruchi Sadhir and Program Analyst/Project Manager Kaci Radcliffe presented the project update and online tool.

11. Other

12:20 p.m.

Crump Lake Update

The meeting was adjourned at 12:22 p.m.

Kate Brown, Governor

Vicki L. Walker, Director



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SUBJECT

Request for approval of a permanent easement for a bridge across the Klaskanine River in Township 07 North, Range 09 West, Clatsop County.

ISSUE

Whether the State Land Board should approve a request from Clatsop County Public Works for a permanent easement to maintain a bridge crossing the Klaskanine River.

AUTHORITY

Article VIII, Section 5 of the Oregon Constitution; requiring the Land Board to "manage lands under its jurisdiction with the object of obtaining the greatest benefit for the people of this state, consistent with the conservation of this resource under sound techniques of land management."

ORS 273.171; relating to the duties and authority of the Director.

OAR 141-123-0010 to 141-123-0120; establishing procedures for granting easements on non-trust lands and requiring Land Board approval of easements granted in perpetuity.

BACKGROUND

Clatsop County is proposing to replace the existing Youngs River Road Bridge over the Klaskanine River. The current bridge, which is located in an area that is designated as essential salmonid habitat, is deteriorating. The County expects replacement will improve the health of the waterway and in-water habitat, decreasing turbidity, improving water flow, and reducing downstream erosion. The new bridge will also be compliant with current fish passage laws.

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The bridge project requires a permanent easement for use on, over, under, or across the publicly-owned waterway, as well as a removal-fill permit for in-water work.

Initially, the County applied for a removal-fill permit in November 2020. The application was circulated among interested parties, government agencies, and other affected stakeholders in April 2021. At this time, ODFW provided comments regarding fish passage, in-water work, and migrating fish, which were all addressed through correspondence between the applicant and ODFW, as well as conditions included in the removal fill permit.

DSL proprietary staff also reviewed the application, determining the existing bridge did not have an easement and a permanent easement would be needed to allow for the replacement. DSL offered the option of the permanent easement to the County, as per OAR 141-123-0070(5)(a). Easements typically require circulation for public comment; however, because relevant agencies and other stakeholders had the opportunity to comment on the proposed project when the removal-fill application was circulated, staff waived the circulation requirement as per OAR 141-123-0050(6)(a).

DSL staff finds the replacement of the existing Youngs River Road Bridge to be in line with general provisions for easements under OAR 141-123-0020 and recommends requesting approval from the State Land Board to issue a permanent easement for this use.

County-owned bridges located outside of city limits are exempt from mandatory compensatory payments (OAR 141-123-0060(1)); therefore, no compensatory payment is required.

RECOMMENDATION

The Department of State Lands recommends the State Land Board approve the issuance of a permanent easement to Clatsop County Public Works, easement number 63695-EA, to maintain and operate a bridge on, over, under or across the Klaskanine River.

APPENDICES

- A. Map
- B. Easement

Agenda Item 2 August 9, 2022 Page 2 of 2



APPENDIX A

63695-EA Easement T07N, R09W Section 13 13,199 Square Feet Clatsop County

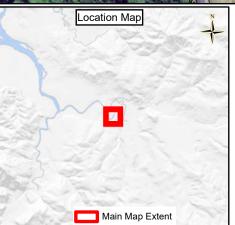


Use Area

This map depicts the approximate location and extent of a Department of State Lands Proprietary authorization for use. This product is for informational purposes only and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information. Feet N W S Map Projection: Oregon Statewide Lambert Datum NAD83 International Feet State of Oregon Department of State Lands 775 Summer St NE, Suite 100 Salem, OR 97301 503-986-5200 www.oregon.gov/DSL Date: 5/10/2022

100

200



STATE OF OREGON Department of State Lands

EASEMENT NO. 63695-EA S&S Bridge

The STATE OF OREGON, by and through its Department of State Lands, GRANTOR, for and in consideration of \$ N/A , hereby grants to GRANTEE,

NAME of GRANTEE:
Clatsop County Public Works

ADDRESS: 1100 Olney Ave. Astoria, OR 97103

a single use easement and right to construct, maintain, operate and replace a bridge over, upon, and across the Klaskanine River situated on the following property in Clatsop County, Oregon, more particularly described as follows:

Permanent Easement for Highway Right of Way Purposes

A parcel of land lying in the NW ¼ of Section 13, Township 07 North, Range 09 West, Willamette Meridian, Clatsop County, Oregon and more particularly described in Exhibit A and as shown on Exhibit A-1.

This Parcel of land contains 0.3 acres, more or less.

TO HAVE AND TO HOLD the same unto GRANTEE in perpetuity, subject to the following conditions:

- 1. GRANTOR has the right to grant additional easements within the area authorized by this easement subject to the provisions of the administrative rules governing the granting of easements.
- 2. GRANTEE shall obtain prior written approval from GRANTOR prior to:
 - a) Changing the type of use authorized by this easement;
 - b) Expanding the number of authorized developments or uses;
 - c) Changing the authorized area; and/or
 - d) Permitting other persons to utilize the easement for uses and developments requiring separate written authorization by GRANTOR pursuant to the administrative rules governing the granting of easements or other GRANTOR requirements.
- 3. The easement area shall remain open to the public for recreational and other nonproprietary uses unless restricted or closed to public entry by the State Land Board or GRANTOR.

- 4. GRANTOR and/or its authorized representative(s) shall have the right to enter into and upon the easement area at any time for the purposes of inspection or management.
- 5. Except as expressly authorized in writing by the Department, GRANTEE shall not:
 - a) Cut, destroy or remove, or permit to be cut, destroyed or removed any vegetation, or
 - b) Remove any sand and gravel, or other mineral resources for commercial use or sale, that occur in the easement area except as expressly authorized in writing by GRANTOR.

Routine right-of-way maintenance including vegetation trimming shall be allowed.

- 6. GRANTEE shall compensate GRANTOR for the fair market value of any commercially valuable timber or sand and gravel resources in the easement area that must be removed during or after placement of the authorized use, or which cannot be developed because of the authorized use.
- 7. GRANTEE shall conduct all operations within the easement area in a manner that conserves fish and wildlife habitat; protects water quality; and does not contribute to soil erosion, or the introduction or spread of noxious weeds or pests. Upon completion of construction, GRANTEE shall reclaim disturbed lands to a condition satisfactory to GRANTOR.
- 8. GRANTEE shall obtain a surety bond in the amount of \$N/A to ensure compliance with the terms and conditions of this easement.
- 9. The right to use this easement shall automatically terminate if it, or the development authorized by GRANTOR, is not used within five (5) consecutive years of the date this easement was granted, pursuant to the provisions of the administrative rules governing the granting of easements.
- 10. Unless otherwise approved in writing by GRANTOR, GRANTEE shall remove all cables, pipes, conduits, roads, and other developments placed by GRANTEE on the easement, and shall restore the surface of the easement area to a condition satisfactory to GRANTOR within one (1) year following termination of use or expiration of this easement.
- 11. GRANTEE shall inspect the condition of the area authorized by this easement and the developments authorized by this easement on a frequency of: as needed.
- 12. GRANTOR shall have the right to stop operation of the use authorized by this easement for noncompliance with the conditions of this easement, the provisions of the administrative rules governing the granting of easements, and/or any lawful requirement by a regulatory agency of this STATE.
- 13. If this easement authorizes the use of state-owned submerged and/or submersible land:

- a) Construction in navigable waters shall conform to the standards and specifications set by the U.S. Army Corps of Engineers and the U.S. Coast Guard for the use authorized by this easement.
- b) Any blasting which may be necessary, or in-water placement, maintenance, or repair of the authorized use shall be performed according to the laws of this STATE, including strict adherence to Oregon Department of Fish & Wildlife in-water work windows.
- 14. GRANTEE shall pay to GRANTOR the current market value, as determined by GRANTOR, for any unnecessary and non-approved damages to state-owned lands caused by construction or maintenance of the easement.
- 15. GRANTEE shall pay all assessments that may be legally charged on public lands which are levied against the property subject to this easement, whether or not such assessments have been levied against the easement area or STATE by the assessing agency.
- 16. GRANTEE shall use the authorized easement area only in a manner or for such purposes that assure fair and non-discriminatory treatment of all persons without respect to race, creed, color, religion, handicap, disability, age, gender or national origin.
- 17. GRANTEE shall ensure that all state, federal and local permits are consistent and compatible with this authorization prior to work commencing.
- 18. This easement is freely transferable. However, no transfer may increase the burden on the easement area or detract from the value of the underlying state-owned land.

[remainder of page intentionally left blank]

This easement does not convey an estate in fee simple of the lands used for a right-of-way. This grant is for an easement only, and title remains in the State of Oregon.



STATE OF OREGON, acting by and through its Department of State Lands

))ss

)

DSL Authorized Signature/Printed Name

Date

STATE OF OREGON

County of Marion

This foregoing instrument was ack	nowledged before me this	of	, 2022,
by	, the		of the
Department of State Lands.			

Signature My commission Expires _____, 20__.

APPENDIX B

CERTIFICATE OF APPROVAL OF CONVEYANCE (ORS 93.808)

accepts, pursuant to ORS 93.808, the grant of an interest in real property from _______, Grantor, as described in the instrument to which this Certificate is attached.

A copy of this Certificate may be affixed to, and recorded with, the instrument described above.

DATED this 30 day of Time , 2022. Classof 5 Lours ica Sta Name: Mon Title: Asst. Course

STATE OF OREGON)) ss. County of _____) On this <u>30</u> day of <u>1000</u>, 2022, before me personally appeared <u>Monica</u> <u>Stello</u>, who being duly sworn stated that he/she is the <u>Asst</u>.<u>County Monof</u> <u>Classop</u> <u>Ounse</u> Grantee, and acknowledged the foregoing instrument to be the voluntary act of said Grantee and that he/she executed the foregoing instrument under authority granted by said Grantee.

and the	OFFICIAL STAMP
(Caller)	THERESA DURSSE
(()******))	NOTARY PUBL'C - OREGON
	COMMISSION NO. 990905

NOTARY PUBLIC FOR OREGO My commission Expires:

STATE TO CLATSOP COUNTY PUBLIC WORKS KLASKANINE RIVER 63695-EA Page 5 of 5

Klaskanine Bridge Easement Description

A portion of Youngs River Road, County Road #95 lying in the NW ¼ of Section 13, Township 7 North, Range 9 West, W.M., Clatsop County, Oregon; the boundaries being more particularly described as follows:

Commencing at the Quarter Section Corner common to Section 13 and 14 of Township 7 North, Range 9 West, W.M., Clatsop County, Oregon;

Thence N62°38'59"E, a distance of 1,195.83 feet to Youngs River Road, County Road #95 centerline Station PI 12+62.00 at the Point of Beginning;

Thence N49°32'52"E, a distance of 30.32 feet;

Thence S48°49'38"E, a distance of 239.88 feet;

Thence S80°10"22"W, a distance of 38.60 feet to centerline Station PI 14+82.00;

Thence S80°10"22"W, a distance of 38.60 feet;

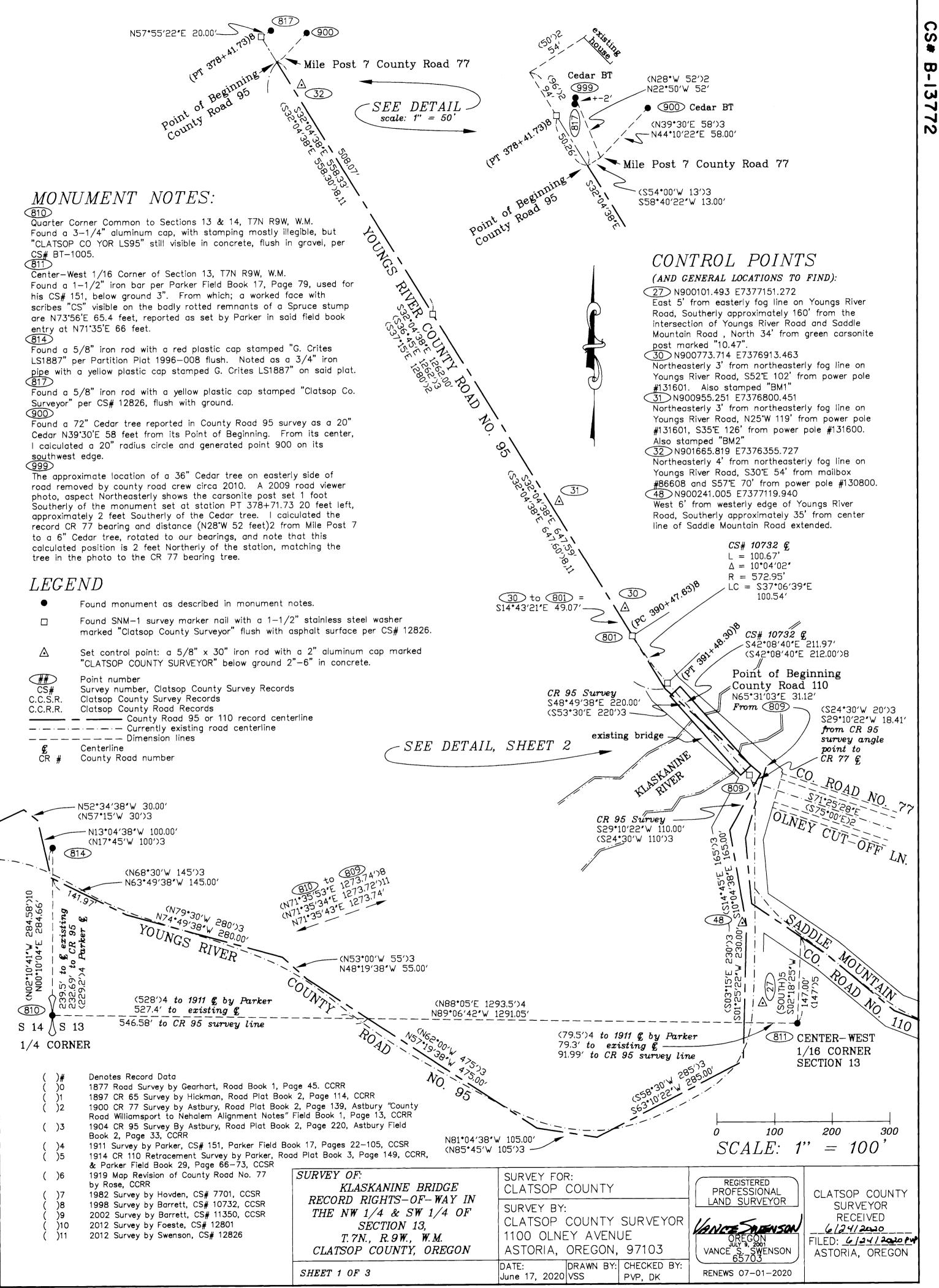
Thence N48°49'38"W, a distance of 200.12 feet;

Thence N49°32′52″E, a distance of 30.32 feet to the Point of Beginning at centerline Station PI 12+62.00

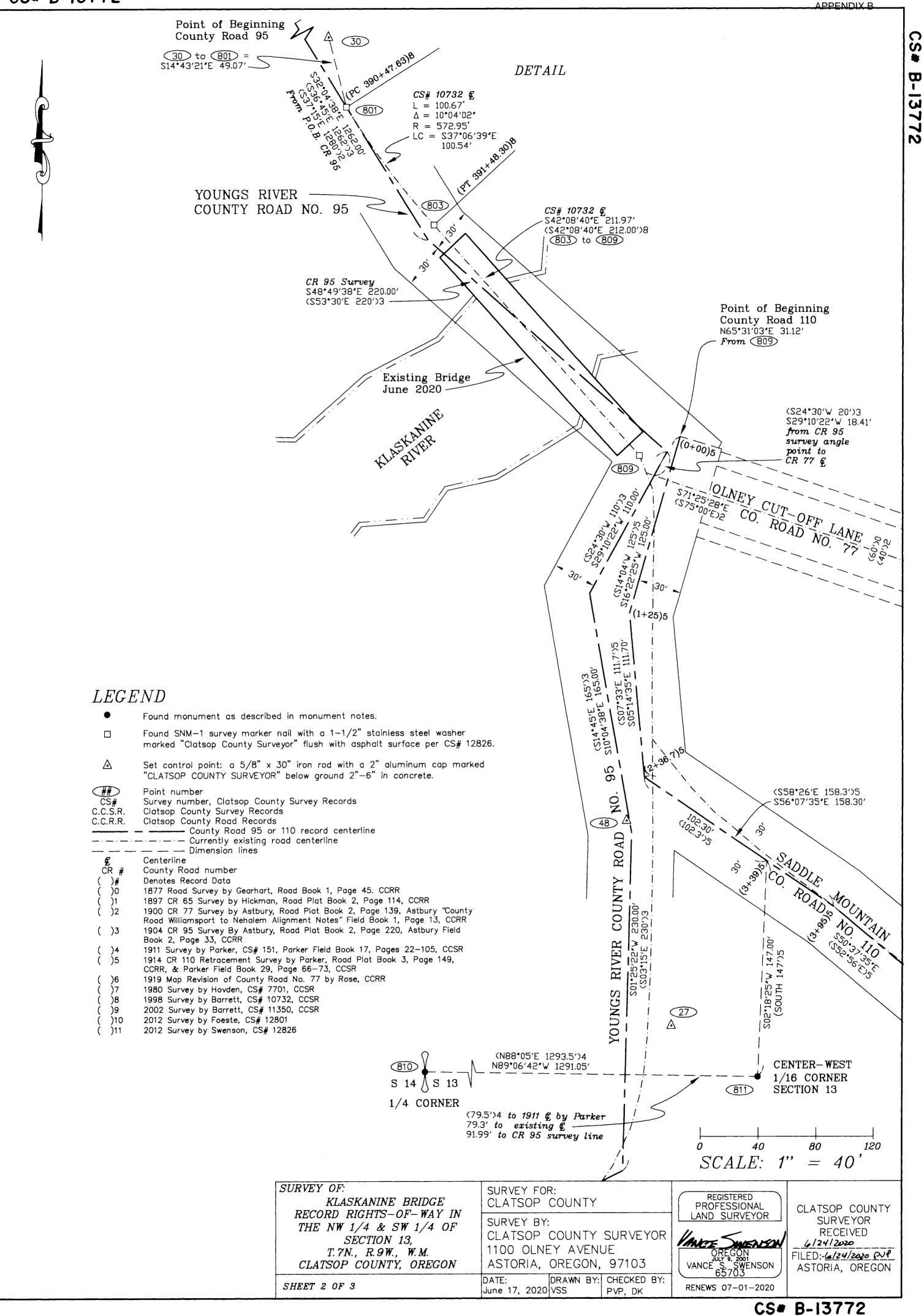
Bearings and distances are grid, based on County Survey CS #B-13772, Oregon State Plane 3601 NAD 83[2011], (Epoch 2010).



RENEWS 7 - 1 - 22



CS# B-13772



NARRATIVE:

Purpose:

To calculate the location of the record surveyed rights—of—way for County Road 95 (Youngs River Road) and County Road 110 (Saddle Mountain Road) at the Klaskanine Bridge in order to confirm that the existing bridge and nearby approaches are within existing record right—of—way. To accomplish this required the standard practice of analyzing and comparing the historic record location of the rights—of—way and the historic physical locations of the roads as described below.

Existing physical Youngs River Road:

The Youngs River Road has been built and rebuilt multiple times since the early 1900's. A 15.5 feet wide concrete roadway was built on it in the 1920's. A map labeled "Clatsop County Retracement and Change Youngs River Loop Road" dated 1964 in the Clatsop County Road Records depicts a newer road alignment overlaid on a depiction of the older road surface. The newer alignment follows the general location of the older road, but straightens out some of the sharper curves. It is recognized that this type of road rebuilding occurred on the entire length of the road, and the older locations of the original survey and roadways generally follow the same course as the existing physical road, but do not match exactly.

Klaskanine Bridge (aka Olney Bridge):

This bridge has been rebuilt multiple times since the late 1800's. A bridge was already in existence in 1897, and was called out in the field notes for both CR 77 and CR 95. Field notes for both surveys have general calls for the approaches and spans on the bridge, but do not have accurate ties to the bridge pilings. At a low tide, we measured to the old pilings underneath the current bridge, and searched for any pilings North and South. There were a few rows of pilings under the bridge that roughly matched some of the locations in the original notes, but given the fact that the original calls were so general, the pilings can only be used to confirm that the existing bridge and old pilings underneath are generally centered on the old right-of-way lines.

History:

1877 Survey by Hayden Gearhart, (Olney Cut-Off Lane), Road Book 1, Page45:

The survey calls the end of the road as a post "at low water mark on Klaskanine Creek, at the lower landing or Carnahan's landing... said post being 15.75 chains south and 1.60 chains west of the south east corner of the N.W. 1/4 of the N.W. 1/4 of section 13 in T.7N. R.9W.", running backwards from the end point, the survey calls are S66*30'E 3.68 chains, thence S71*E 7.50 chains. Reviewing this survey's map as well as an 1887 map on Road Book 1, Page 290 showing this road ending at "Kamm's Steamer L'ndg", and topography on Olney Cut-Off Lane Easterly of the bridge, it's clear that this survey was along the currently existing road.

The resolution and order for this road doesn't state a width. Per Oregon State Law in 1877, if no width is stated in the resolution and order, the default width for a county road is 60 feet. The 1900 County Road 77 that is also along this portion of road has an established width of 40 feet along this portion. The current width of this portion of right-of-way has not been determined on this survey.

1890 Town Plat of Olney, Town Plat Book 2, Page 1 Clatsop County Clerk's Records:

This plat depicts Main Street as 60 feet wide running S33'41'E to the north end of the bridge centered on it. The plat was subject to the March 16, 1893 County Circuit Court decree that it was "null and void, set aside, and held for naught", in Journal 9, Page 582. Since the plat and decree occurred prior to the County Road 77 and County Road 95 establishments, they have no direct bearing on these two county roads.

1897 County Road 65 by P.E. Hickman, Road Plat Book 2, Page 114:

The survey calls for the northerly end of the road as "to stake marked "R" on the County Road from Astoria to the Nehalem River, 30 feet South from the East end of a certain draw Bridge across the Klaskanine Creek.", running backwards from the end point, the survey calls are S5'45'W 94 feet, thence S11'15'E 119 feet. I searched for records for the stated "County Road from Astoria to the Nehalem River" and currently found none other than the platted street in Olney.

The resolution and order clearly states a width of 40 feet for County Road 65.

1900 County Road 77 by R.C.F. Astbury, Road Plat Book 2, Page 139:

The survey calls for "Olsons House 50 ft left." thence "S37'15'E 1376 feet along Main Street, Olney. At 96 ft. 7 Mile Post from which a Cedar 6" dia bears N28'W 52 ft.". From Mile post 7, the field notes continue on a long tangent S37'15'E 1280 feet, thence S56'30'E 295 feet on bridge, thence S75'00'E 430 feet.

The 1901 resolution and order clearly states a width of 40 feet for County Road 77. 1904 County Road 95 by R.C.F. Astbury, Road Plat Book 2, Page 220: The survey calls for "Beginning at the 7 Mile Post on County road No. 77 marked "R", and from which has a call to a 6" Spruce N57'30'W 77 feet that is now missing, and to a 20" Cedar N39'30'E 58 feet, which is now a 72" Cedar tree in the yard of the old Olson house. From Mile Post 7, the field notes call "S54'00'W 13 feet to the center of planking of Co. Road No 77", thence S36'45'E 1262 feet along planking; thence S53'30'E 220 feet over bridge; thence S24'30'W 20 feet to where it leaves Co. Road No 77, thence continuing S24'30'W 90 feet along County Road 65.

1919 Map of Revision of County Road 77 by A.C. Rose, Clatsop County Road Records:

This survey appears to be the basis of asphalt and concrete construction on this portion of road in the 1920's and has been used as a basis of the alignment of County Road 77 North of the bridge on newer surveys, as it has survey information including curves information and data necessary for contemporary road description requirements. Although A.C. Rose's map is very accurate and states a width of 60 feet, a search of the County Commissioners Journals revealed no actions to adopt this alignment for the official right-of-way for this portion of road.

1982 Retracement of A.C. Rose Map of Revision of County Road 77 by Robert Hovden, CS#7701:

Hovden used the centerline of the then-existing old concrete pavement to determine A.C. Rose's 1919 road alignment. The information on this survey has been held on subsequent surveys for the center line of County Road 77 North of the bridge.

1998 Map of Youngs River Loop Road by Dale Barrett, CS# 10732:

This survey retraced Youngs River Loop Road from Highway 202 to the Klaskanine River Bridge using the 1919 A.C. Rose survey data as determined by Robert Hovden on CS# 7701. This survey focused on the County Road 77 width of 40 feet for its entire length from Highway 202 to the bridge, and omitted the fact that County Road 95 began a quarter of a mile North of the bridge. There appears to be no attempt on this survey to locate the Point of Beginning of CR 95, or its bearing tree references at Mile Post 7 of County Road 77, and makes no reference at all to CR 95. Because CR 95 was entirely ignored, this survey can't be relied on to determine its width.

Method:

Basis of Bearings:

Bearings and Distances and coordinates are Oregon State Plane 3601 NAD 83[2011] (Epoch 2010) determined by National Geodetic Survey Online Positioning User Service (OPUS) using static GPS observations on control points 30 and 31 on January 29, and February 3, 2020. A combination of continuously operating reference stations (CORS) P415, P420, P446, JIME and CHZZ were held for control. The convergence angle at point 30 is -2*18'25"; the combined scale factor at point 30 is 1.00002757.

County Road 95:

Astbury's 1900 survey of CR 77 and his 1904 survey of CR 95 lists bearings to the nearest quarter of a degree and distances to the nearest five feet. Factoring in the inherent low-precision in the original survey, the CR 95 survey does appear to generally follow the current physical road location for its length.

I began by drafting the record CR 95 centerline data from the point of beginning to the end point of the survey for this road. I then rotated the record County Road 95 survey bearing for its first tangent to our measured center line of the existing road as measured on CS# 7701, and subsequently held on CS# 10732, CS# 11350 and CS# 12826. I then held the record angles and distances from this tangent to point 900 at the found Cedar bearing tree for Mile Post 7 to establish the Point of Beginning of County Road 95. I noted that the record County Road 77 bearing and distance of N28'W 52 feet from its Mile Post 7 to its Cedar bearing tree matched closely with the location of a 36" Cedar tree shown in a 2009 photo approximately 2 feet Northwest of P.T. station 378+41.73 20 feet left. I held the record angles and distances from the Point of Beginning, aligned to the first tangent to calculate the centerline of Astbury's original County Road 95 survey until it crosses the west line of Section 13. The first record tangent on the southeast side of the bridge is S24'30'W 20 feet to a notation "leave Road No 77". This matches the extension of the measured centerline of the current roadway on CR 77 on Olney Cut-Off Lane, which intersects this tangent at 18.4 feet. As expected, due to the low precision of the record data, the record CR 95 centerline location quickly diverges and converges with the current roadway Southerly of this point.

See accompanying map for distance comparisons at intersections of the road center lines with the East-West Centerline and the West Line of Section 13. It is noted that the current road's centerline is the same distance from West 1/4 Corner and the Center-West 1/16 corner as the distance measured by Gelo Parker in 1911 in Parker Field Book 17, Pages 78 and 79, whereas the record CR 95 intersections aren't close at these locations. At its intersection with the West Section line, the record CR 95 centerline is within 3 feet Northerly of the center of the road as tied by Parker in 1911 in Parker Field Book 17, Page 36 and 6 feet Southerly of the center of the presently existing road.

The resolution and order, as well as all other county court records for County Road 95 don't state a width. Per Oregon State Law in 1904, if no width is stated in the resolution and order, the default width for a county road is 60 feet. This is confirmed by County Surveyor Gelo Parker's statement in his 1911 transcription of the County Road 95 description in his Field Book 17, Page 14: "Petition Road No. 95 Apr 6 1904 60' (not stated in petition) Beginning at 7 M post on Road 77..." It should be noted that Parker transcribes multiple other road descriptions in the same field book and correctly states the widths of those with widths stated in their resolution and orders, and correctly states the default width of 60 feet in those with no stated width, following state law at the time. As County Surveyor beginning in 1880, and having surveyed or been involved in many of the first County Roads in Clatsop County, he would be the one person with the most knowledge by far on legal county road widths during this time period.

The previous surveys list bearings to the nearest quarter-degree and distances to the nearest five feet. They also employ methods of measurement that are a traverse from angle point to angle point, not tracing the curves of the roadways. Recognizing this method, it still appears that the surveyed lines generally follow the courses of the presently existing roads. Fortunately, the first tangent of County Road 95 is nearly a quarter of a mile long, giving an opportunity to use the original POB bearing tree for location, and the tangent for alignment, to create a fairly accurate location of the surveyed CR 95 centerline across the bridge.

1914 County Road 110 retracement by Gelo Parker of the original 1907 survey by George Stevens. Road Plat Book 3, Page 149 = Parker. Road Plat Book 2, Page 278 = Stevens:

The first mile of George Stevens 1907 survey (Road Plat Book 2, Page 278, CCRR) was retraced by Gelo Parker in 1914. Parker set an iron bar at the Point of Beginning using Stevens two bearing trees near the southeasterly end of the bridge. In his Field Book 29, Page 66, he states "1 obtained true meridian by solar & today 7/29/1914 relocated "R" by measure from the witnesses." We searched for the monument at the point of beginning and Stevens two witness; they are all now missing. From the point of beginning, Parker's survey calls "S14'04'W 125 feet, thence S7'33'E 111.7 feet, thence S58'26'E 102.3 feet to station 3+39 feet, at which station he calls for a post and iron rod South 147 feet at the Center-West 1/16 Corner of Section 13, set by him in 1911 on CS# 151. We found this iron rod.

The resolution and order, as well as all other county court records for County Road 110 don't state a width. Per Oregon State Law in 1907, if no width is stated in the resolution and order, the default width for a county road is 60 feet. This is confirmed by County Surveyor Gelo Parker's statement in his 1911 transcription of the County Road 110 description in his Field Book 17, Page 20: "Petition Road No. 110 Feb 1907 60' No width in petition".

County Road 77:

I held the same point for Mile Post 7 of CR 77 as determined for CR 95. I then held the same bearing for the first tangent, and the record angles and distances from this point for three tangents past Mile 7. I note that this centerline differs slightly as it crosses the bridge, but the 40 feet wide right-of-way is entirely within the 60 feet wide CR 95 right-of-way. A Westerly extension of the first tangent on the presently existing Olney Cut-Off Lane intersects the CR 95 surveyed line 18.4 feet Southerly of its angle point, which matches the record CR 95 distance 20 feet within its nearest-five-feet measurement calls. Therefore, I held our measurements to the existing road's centerline for the Olney Cut-Off Lane tangent of CR 77. I depicted the 40' and 60' widths for reference only; it is not the purpose of this survey to determine the right-of-way lines of Olney Cut Off Lane at this time.

County Road 110:

I held Parker's record angles and distances from monument 811 at the Center-West 1/16 corner, and I rotated Parker's true bearings that he obtained by solar observation 2'10'25" clockwise to our State Plane Bearings to calculate the record center line of CR 110 shown. This calculated record centerline matches well with the centerline of the existing road.

County Road 65:

The End Point of this road survey can't be accurately retraced since the call to a stake 30 feet south from the east end of the bridge is vague. Since CR 95 is described as being along CR 65 on this portion, the center of the calculated CR 95 would be the best location of CR 65 near the bridge.

1919 Map of Revision of County Road 77 by A.C. Rose, Clatsop County Road Records:

I held the record location of the centerline of this survey as determined on CS# 7701, and held on CS# 10732, CS# 11350 and CS# 12826. As noted in the history, CS# 10732 appears to ignore the officially adopted County Road 95 right-of-way across the Klaskanine Bridge. It also describes being done for legalization purposes. A search for any official record of a legalization based on this survey revealed none, and I confirmed with current and former county staff that one was never done based on this survey.

Analysis:

Although it is possible to calculate the locations of the rights-of-ways of CR's 77, 95, and 110 in the close vicinity of the bridge due to the existence of the bearing trees at Mile Post 7 of CR 77 and the first long tangent Southerly therefrom, as well as Parker's tie to the Center-West 1/16 corner for CR 110, as would be expected for low precision surveys, they do not provide a sufficient level of accuracy desired today. A future survey of the entire existing center line of Youngs River Road as a basis of its legalization is advised.

SHEET 3 OF 3	DATE: DR June 17, 2020 VS		RENEWS 07-01-2020	
SURVEY OF: KLASKANINE BRIDGE RECORD RIGHTS-OF-WAY IN THE NW 1/4 & SW 1/4 OF SECTION 13, T.7N., R.9W., W.M. CLATSOP COUNTY, OREGON	1100 OLNEY	DUNTY SURVEYOR	REGISTERED PROFESSIONAL LAND SURVEYOR OREGON JULY 9, 2001 VANCE S. SWENSON 65703	CLATSOP COUNTY SURVEYOR RECEIVED <u>(/24/2020</u> FILED: <u>(/24/2020 PUR</u> ASTORIA, OREGON



Department of State Lands

775 Summer Street NE, Suite 100 Salem, OR 97301-1279 (503) 986-5200 FAX (503) 378-4844 www.oregon.gov/dsl

State Land Board

MEMORANDUM

Kate Brown Governor

Shemia Fagan Secretary of State

> Tobias Read State Treasurer

Date: August 9, 2022

- To: Governor Kate Brown Secretary of State Shemia Fagan State Treasurer Tobias Read
- From: Vicki L. Walker Director, Department of State Lands
- Subject: Abandoned and Derelict Vessel Removal Plan

OVERVIEW

The people of Oregon own the beds and banks of all navigable and tidally influenced waterways throughout the state. On behalf of the State Land Board, the Department of State Lands manages Oregon's public waterways to ensure use for recreation, navigation, fishing, commerce and more.

Abandoned and derelict vessels seriously threaten the health and safety of Oregon's waterways by creating both environmental and navigational hazards. Threats include water contamination, habitat degradation, public and private property damage, and impacts on recreational and commercial use and enjoyment of waterways.

For years, the Department has been working with state, federal, and local partners to clean up and remove abandoned and derelict recreational and commercial vessels. These collaborative efforts have resulted in removing hazardous vessels from waterways, but lack of a statewide abandoned and derelict vessel program with dedicated funding has created two major problems:

• Oregon's schoolkids foot the bill for cleaning up abandoned and derelict vessels. Since 2017, the Common School Fund has expended

\$12.9 million removing commercial and recreational vessels from public waterways.

• Hundreds of abandoned and derelict vessels currently need to be removed from Oregon's waterways – but removal must be accompanied by comprehensive, collaborative solutions to address perpetual risks. Removing the vessel backlog is critical to addressing current risks. Creation of a statewide program is critical to addressing perpetual risks. In 2018, Oregon joined west coast states and British Columbia in developing a white paper examining abandoned and derelict vessel issues, as well as a model blue-ribbon program to effectively address those issues. See Appendix A for an overview. This work provides a foundation for Oregon to develop a program that aligns with existing regulatory frameworks and agency roles while also meeting the specific needs of our state.

At the State Land Board's direction, the Department has developed a 2023-25 policy option package request for \$40 million in general funds. The requested resources will:

- Remove the abandoned and derelict vessels currently in Oregon waterways. The Department will launch an initiative to accelerate removing the vessel backlog in the next biennium. Though the Department anticipates making significant progress, expending the entire requested amount in a single biennium is unlikely. The Department is requesting funding be continuously appropriated so remaining funds may be carried over to the next biennium.
- Support Department participation in collaborative efforts to address abandoned and derelict vessels long-term. The Department recognizes the complex nature of this work and the importance of ongoing collaboration to identify problems, priorities, and solutions. Extensive discussion of this issue is likely in coming months and during the legislative session. The Department remains committed to working with legislators, state and federal agencies, local governments, ports, and other partners to develop long-term comprehensive solutions for addressing abandoned and derelict vessels.

The three-year plan outlined below captures the Department's work over the next year – which includes working with partners and stakeholders to ensure successful outcomes during the 2023 legislative session – as well as work planned with resources being requested for the 2023-25 biennium.

The Department will provide the State Land Board with regular updates, including presenting a detailed plan for 2024 following the conclusion of the 2023 legislative session.

FY 2023-2025 ABANDONED AND DERELICT VESSEL (ADV) REMOVAL PLAN

Phase One – August 2022-July 2023

Engaging Widely and Updating Cost and Vessel Information

Phase Overview

Work during the first phase will build on and expand existing relationships and information, preparing the Department to act quickly when resources are provided in the next biennium. This work includes:

Continuing Collaboration to Remove Vessels without Cost to the Common School Fund. The Department is moving forward with removal of the Alert, Sakarissa, and Tiffany vessels and will request general funds to cover costs as directed by the State Land Board in June 2022.

Engaging Partners and Stakeholders. The Department will engage widely with the many partners and stakeholders who are essential to vessel removal, including the Oregon State Marine Board, Oregon Department of Environmental Quality, U.S. Coast Guard, local governments, ports, community organizations, waterway user groups, and businesses. These conversations will further shape and refine the resource request as challenges and opportunities associated with removal are discussed and additional perspectives gathered.

Updating Cost Information and Vessel List. The existing cost estimate of \$39 million was developed largely with the blue-ribbon report's general formula for approximating removal costs. Cost estimates will be updated as possible using information gained during removal of the Alert, Sakarissa, and Tiffany. However, the Department recognizes professional inspection of commercial ADVs is needed to evaluate condition, contamination levels, environmental and physical hazards, and other vessel-specific factors that affect removal cost.

Additionally, Oregon does not have a comprehensive or current list of abandoned and derelict vessels. The Department works with state and federal partners to track vessels of concern, inputting information reported to agencies and evaluating vessels for their potential threat to humans and the environment. This evaluation helps prioritize removal resources and is based on factors like vessel condition and size; condition of anchorage or mooring; proximity to navigation channels, recreational areas, or environmentally sensitive areas; and general potential for harm to people or property.

However, due to changing conditions and vessel movement as well as lack of agency capacity, keeping a current list is extremely difficult. In consultation with partners, DSL will update the ADV list to better capture the extent of known ADV removal needs and better estimate the resources needed.

Identifying Priorities with Partners. The Department will engage partners and stakeholders in initial prioritization of vessels for removal when funding is approved, and anticipates hiring a consultant with expertise in ADV removal to inform the prioritization process and further improve understanding of costs. This prioritization will guide removal work, with awareness that flexibility will always be needed to address emergency situations. Existing Department resources will also be used to gather in-depth information about priority commercial vessels to support expedited procurement of cleanup services.

Phase Outcomes – by July 1, 2023

- Removal of Alert, Sakarissa, and Tiffany vessels
- Updated cost information and vessel list
- Initial identification of ADV removal priorities
- Oregon Legislature provides resources and/or direction to address ADVs

Phase Two: July to December 2023

Staff and Launch Vessel Removal Initiative

Phase Overview

With resources secured during the legislative session, the Department will launch the vessel removal initiative. Focus in this six-month second phase is quickly mobilizing to remove vessels, with an emphasis on:

Hiring Staff. The Department is requesting five new positions to support ADV removal projects across the state. These positions include a manager to oversee the removal initiative and statewide collaboration, a natural resource specialist to provide technical expertise on vessel removal and act as a liaison for communities and contractors, a project manager to coordinate, track and report on removals, a procurement specialist to manage delegated authority and ensure efficient procurement and contracting processes, and an office specialist to support administration of the removal initiative. Ideally, other state agencies involved in this work will be given their own appropriations to have at least one staff person dedicated to work in coordination with the DSL team.

Streamlining Processes and Developing Work Plan. With new staff adding capacity and expertise, the Department will design and implement a streamlined procurement process for ADV removal, including solicitation, contracting, and scheduling for collection, dismantling and disposal. The Department in July 2022 received delegated authority from the Department of Administrative Services to execute contracts of up to \$10 million for ADV removal; securing that authority was a critical first step in expediting procurement of removal services. Increased capacity will also allow for development of a work plan for priority removals as identified in phase one, with continued flexibility to address emergency situations or changing needs. The Department will also perform in-depth assessment of

additional commercial vessels and incorporate their removal into the work plan.

Exploring ADV Removal Barriers. Working collaboratively with partners, the Department anticipates exploring known barriers to efficient and cost-effective removal of ADVs, including lack of disposal sites and absence of a statewide ADV tracking system. These conversations may help identify needs and potential projects to accelerate removal work and ensure maximum efficiency in expending resources.

Additionally, the Department anticipates supporting efforts to develop a statewide ADV program during this phase, as additional staffing will ensure capacity for participating in collaborative work.

Phase Outcomes – by December 31, 2023

- Five new ADV team members hired
- Streamlined procurement process and workplan in place
- Begin exploration of ADV removal barriers

Phase Three – January 2024 to June 2025

Removing Abandoned and Derelict Vessels

Phase Overview

Work in the third phase of the plan focuses on removing abandoned and derelict vessels from Oregon's waterways, using the processes and plans established in previous phases to:

Remove commercial vessels. There are 19 known commercial vessels of concern statewide; that number includes the Sakarissa, Alert and Tiffany vessels anticipated to be removed in FY 2023. Removal projects will be prioritized as identified in earlier phases, with consideration of flexibility necessary to address emerging issues or opportunities.

Remove recreational vessels. There are an estimated 175 recreational ADVs in the Portland metro area; no statewide recreational ADV information is currently available. As with commercial vessels, recreational removal projects will be prioritized as identified in earlier phases, with consideration of flexibility necessary to address emerging issues or opportunities.

Set removal targets for the 23-25 biennium. The information gathering and planning work of earlier phases will allow the Department to set realistic targets for removing both commercial and recreational vessels, and to report on ADV removal initiative progress.

Department participation in any statewide program development efforts will continue during this phase as well.

The third phase also includes looking ahead to the work of the 25-27 biennium by developing removal plans for remaining ADV initiative dollars, as well as collaborating with partners and stakeholders to identify policy and budget needs and priorities for the 2025 legislative session.

Phase Outcomes – by June 30, 2025

- Establish and meet removal targets
- Develop removal plans for remaining fund dollars
- Identify 2025-27 legislative needs and priorities

APPENDIX A – BLUE RIBBON MODEL PROGRAM OVERVIEW

Oregon participated in the Pacific States/British Columbia Oil Spill Task Force's Abandoned and Derelict Vessel (ADV) Workgroup, which developed a white paper examining ADV issues as well as a model blue-ribbon program with recommendations for addressing those issues.

The recommendations focus on five key elements identified as important for a successful ADV program: authority; prevention; public outreach and education; removal and deconstruction; and funding.

An overview of each of the five elements, including brief report excerpts, is below. The model program provides a foundation for Oregon to develop an ADV program that aligns with the existing regulatory framework and agency roles, but also meets the state's unique challenges and opportunities.

<u>Authority</u>

"Authority refers to the legal ability of a governing agency to declare a vessel "abandoned" and thus remove and dispose of it. The issue of authority regarding ADVs is complex, with multiple federal, state, and local agencies involved, as well as private landowners."

Recommendations for this program element include ensuring authority to remove hazardous vessels while protecting due process, empowering local governments and private property owners to play a role in ADV identification and removal, and ensuring vessels can be disposed of in publicly beneficial ways.

Considerations for exploring this program element:

- Identifying authority-related issues and priorities requires a collaborative process.
- Legislative action will be necessary to resolve authority-related issues.

Prevention

"There are many reasons vessels become abandoned or derelict, all of which should be factored into a comprehensive and effective prevention program."

Recommendations for this program element include establishing a comprehensive database for tracking ADVs, establishing a vessel turn-in program, and ensuring appropriate insurance and/or financial assurances to reduce or limit the risk of ADVs.

Considerations for exploring this program element:

- Some recommendations could be piloted in Oregon using existing authority, for example a program for owners to turn in vessels.
- Other recommendations, including those related to registration, enforcement, insurance monitoring, and claims, would require legislative action.

Public Outreach and Education

"Effective outreach and education can help reduce and prevent ADVs by raising awareness, encouraging compliance and preventive behaviors, and engaging the public with the issue at the local level."

Recommendations for this program element include developing a comprehensive, strategic ADV stakeholder outreach and engagement plan.

Considerations for exploring this program element:

- Development of such a plan requires a collaborative process.
- ADV cleanup activities provide an opportunity to expand engagement efforts to reach current and new partners and stakeholders.

Removal and Deconstruction

"Properly removing and disposing of ADVs is the most resource-intensive aspect of addressing them. A large number of complicated, expensive, and carefully orchestrated steps must come together for a vessel to be prepared for removal, removed, and then disposed of."

Recommendations for this program element include establishment of permitted vessel deconstruction facilities and coordinated ADV disposal events.

Considerations for exploring this program element:

- Identifying Oregon removal and deconstruction-related issues and priorities requires a collaborative process.
- Work within this program element has potential to accelerate removal of the vessel backlog.
- Cleanup funding has potential to support implementation of recommendations within this program element.

<u>Funding</u>

"In summary, large initial sums of money are needed to address the backlog of legacy ADVs, and smaller sums will be needed to address new ADVs on an annual basis. The need for ongoing funding could be minimized with effective vessel turn-in programs and other preventative measures."

The blue-ribbon report indicates approximately \$1 to \$5 million will be needed annually to remove new ADVs after the existing vessel backlog is addressed.

Recommendations for this program element include establishing sufficient funds to address both recreational and commercial ADVs, both existing and new vessels, as well as a reliable annual funding mechanism.

Considerations for exploring this program element:

- Collaboration is needed to explore mechanisms for reliable annual funding while developing programs that keep ongoing funding needs contained.
- Ongoing costs have the potential to be reduced through prevention and other initiatives outlined in the blue-ribbon report's model program recommendations.

Full Blue-Ribbon Program Report and Other Resources

Abandoned and Derelict Vessel (ADV) Blue-Ribbon Program for Western U.S. States Blue Ribbon Program Report Executive Summary The Current State of Abandoned and Derelict Vessels on the West Coast – White Paper ADV Workgroup Website



Department of State Lands

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State Land Board

Kate Brown Governor

Shemia Fagan Secretary of State

> Tobias Read State Treasurer

<u>SUBJECT</u>

State Land Board appointment of one voting member to the Oregon Ocean Science Trust.

ISSUE

Whether the State Land Board should appoint Dr. Karina Nielsen to the Oregon Ocean Science Trust.

AUTHORITY

Oregon Constitution, Article VIII, Section 5

ORS 196.565; regarding appointment of the Ocean Science Trust

ORS 183; regarding administrative procedures and rules of state agencies

ORS 273; regarding the creation and general powers of the Land Board

ORS 274; regarding submerged and submersible lands in general

BACKGROUND

The Oregon Ocean Science Trust was created by the Oregon Legislature in 2013 by Senate Bill 737. The duties of the Trust are to:

- Promote peer-reviewed, competitive research and monitoring that leads to increased knowledge and understanding of Oregon's ocean and coastal resources.
- Promote innovative, collaborative, community-oriented, multi-institutional approaches to research and monitoring related to Oregon's ocean and coastal resources.

State Land Board

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- Enhance this state's capacity for peer-reviewed scientific ocean and coastal research; and
- Subject to available funding, establish and execute a competitive grant program to conduct research and monitoring related to Oregon's ocean and coastal resources.

The Trust submits a report to the Legislative Assembly each even-numbered year. The report describes the progress of the Trust in carrying out its duties, and may include relevant issues and trends of significance, including emerging scientific research and public policy.

APPOINTMENT OF VOTING MEMBERS

The Trust is comprised of seven members. The State Land Board appoints the Trust's five voting members; the President of the Senate and the Speaker of the House appoint one nonvoting member from each respective chamber.

Voting members must be Oregon residents who demonstrate a commitment and interest in the stewardship of Oregon's ocean and coastal resources; and have not less than five years of experience in competitive granting, marine science, foundations, or fiscal assurance.

Voting members are appointed to four-year terms but serve at the pleasure of the Land Board. Before a voting member's term expires, the Board shall appoint a successor whose term begins on January 1 of the following year. A voting member is eligible for reappointment. Should a vacancy occur prior to term expiration, the Land Board shall make an appointment to become immediately effective for the unexpired term.

NOMINATION OF A VOTING MEMBER

Dr. Nielsen is the director of Oregon Sea Grant. The Trust has recommended Dr. Nielsen to complete the unexpired term of Dr. Shelby Walker, the former director of Oregon Sea Grant. Dr. Nielsen has specific experience with coastal zone research and environmental monitoring, as well as working across institutions and with community members to develop evidence-based understanding of different stewardship approaches. She also brings extensive experience with the peer-review process, developing requests for proposals, evaluating proposals, and making funding decisions through competitive grant programs.

Dr. Nielsen previously served on the California Ocean Science Trust Board, a connection which will be beneficial in working across the state lines for the betterment of ocean science on the Pacific coast.

RECOMMENDATION

The Department recommends the State Land Board appoint Dr. Karina Nielsen to complete the unexpired term on the Oregon Ocean Science Trust, effective immediately and ending December 31, 2023.

APPENDICES

A. Letter of Interest and CV

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APPENDIX A

Karina Johanne Nielsen, Ph.D. Interdisciplinary Marine Ecologist

May 23, 2022

Laura Anderson, Chair Oregon Ocean Science Trust 775 Summer St, Suite 100 Salem, OR 97301

Dear Ms. Anderson,

Thank you for the invitation to consider serving as a member of the Oregon Ocean Science Trust (OOST). As the incoming Oregon Sea Grant Director, it would be an honor for me to support the work of OOST. For most of my career as an academic scientist I have been involved in substantial public service work related to coastal and ocean science and stewardship. I have extensive experience with coastal zone research and environmental monitoring, as well as working across institutions and with community members to develop evidence-based understanding of different stewardship approaches. I also have extensive experience with the peer-review process, developing requests for proposals, evaluating proposals, and making funding decisions through competitive grant programs. Please see my CV for additional details.

Although I am new to the role of director at Oregon Sea Grant, I am not new to Oregon. My family and I drove and car-camped across the US from Brooklyn, NY to move to Corvallis, OR when I started my graduate education at Oregon State University in 1992 and my son was starting elementary school. My graduate and postdoctoral research led me to spend considerable time getting to know the natural beauty and communities of the Oregon coast. I am thrilled to be returning. I hope to contribute in meaningful ways to science-based and community-engaged stewardship of the natural and cultural heritage of the coastal zone in Oregon. Service on the OOST would be a welcome opportunity to contribute.

Thank you very much for nominating me to serve as a member of the Oregon Ocean Science Trust.

Sincerely,

Karina J. Nielsen, Ph.D. Director (incoming), Oregon Sea Grant

Curriculum Vita Karina J. Nielsen, PhD

karina.nielsen@oregonstate.edu

f <u>seagrant.oregonstate.edu</u>

in linkedin.com/in/karina-j-nielsen

Oregon Sea Grant Oregon State University 1600 SW Western Blvd, Suite 350 Corvallis OR 97333 \$ 541.737.2714

EDUCATION

Ph.D., Oregon State University, 1998

Dissertation: *Bottom-up and top-down forces in tidepools: the influence of nutrients, herbivores, and wave exposure on community structure.* Co-advisors: Jane Lubchenco & Bruce A. Menge

B.S., Summa Cum Laude, Brooklyn College - City University of New York, 1992 Honors Thesis: Patterns of mussel (Guekensia demissa) recruitment to a Spartina alterniflora salt marsh. Advisor: David R. Franz

Hampshire College, September 1979 - June 1982 Coursework in art history, fine art photography, filmmaking and holography.

PROFESSIONAL EXPERIENCE

- June 2022 (Incoming) Director, Oregon Sea Grant, Oregon State University
- 2018 2022 Executive Director, Estuary & Ocean Science Center, San Francisco State University
- 2014 2017 Director, Romberg Tiburon Center for Environmental Studies, San Francisco State University
- 2014 2022 Professor, Department of Biology, San Francisco State University
- 2013 2014 Professor, Department of Biology, Sonoma State University
- 2007 2022 Senior Research Associate, Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO)
- 2010 2011 Faculty Research Associate, Academic Affairs, Office of Research & Sponsored Programs, Sonoma State University
- 2008 2013 Associate Professor, Department of Biology, Sonoma State University
- 2003 2008 Assistant Professor, Department of Biology, Sonoma State University
- 2000 Instructor, Hatfield Marine Science Center, Oregon State University
- 1993 1998 Research Assistant, Department of Biology, Oregon State University
- 1992 1998 Teaching Assistant, Departments of Zoology & Biology, Oregon State University
- 1992 –1993 Research Assistant, Department of Biology, Brooklyn College, City University of New York

POSTDOCTORAL RESEARCH EXPERIENCE

2000 – 2003 Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) Postdoctoral Research Associate, Department of Zoology, Oregon State University. 1998 – 2000 National Science Foundation International Postdoctoral Fellowship, Estacíon Costera de Investigaciones Marinas (ECIM), Pontificia Universidad Católica de Chile.

GRANTS AND FELLOWSHIPS

- 2021 2026 National Oceanographic and Atmospheric Administration \$386,875 subaward via Monterey Bay Aquarium Research Institute to co-PI Nielsen/SFSU. The Central and Northern California Ocean Observing System: Information solutions to power healthy and prosperous oceanic, coastal and estuarine communities. PIs: Primary contact: Henry Ruhl (Monterey Bay Aquarium Research Institute [MBARI], co-PIs: F Chavez, Y Takeshita, J Ryan, & A Harper (MBARI); R Bochenek, S St Savage (Axiom Data Science); S Norris, J Sedano, J Silva, G Popescu (California Indian Environmental Alliance); A Parker (Cal. State Uni. Maritime Acad.); C Garza (CSU Monterey Bay); R Walter, E Bockmon, A Pasulka, H Liwanag (Cal Poly SLO.); C Whelan (CODAR Ocean Sensors); M Miller (Exploratorium); M García-Reves, J Dorman, W Sydeman (Farallon Institute); J Tyburczy, B Tissot, E Bjorkstedt (Humboldt State University); J Paduan, J Joseph, M Orescanin (Naval Postgraduate School); J Doyle, H Jin, R Clare (Naval Research Laboratory); L Peavey, Reeves, J Brown, S Haver (NOAA); S Semans (Novo Center for Marine Science); C Van Vranken (Ocean Data Network); J Barth (Oregon State University); J Jahncke, M Elliot, (Point Blue Conservation Science) K Nielsen, R Dugdale (San Francisco State University); T Connolly, M Grand, H Bowers (San Jose State University, Moss Landing Marine Lab); B Block, M Castleton, S Monismith, R Dunbar, F Micheli (Stanford University) J Largier, T Hill, B Phillips, L Rogers-Bennett (UC Davis); Y Chao, F Chai, K Kavanaugh (UC Los Angeles); R Kudela, C Edwards, D Costa, A Moore, K Kroeker, J Fiechter (UC Santa Cruz); D Rudnick (UC San Diego); T Bell, D McGillicuddy (Woods Hole Oceanographic Institution).
- 2020 2023 **Ocean Protection Council** \$824,809 Restoring Eelgrass in Living Shorelines: Opportunities to Combine Shore Protection with Amelioration of Ocean Acidification PI: Katharyn Boyer; co-PI: Karina Nielsen (EOS Center, SF State).
- 2020 2021 **Honda Marine Science Foundation** \$74,900 Smithsonian Living Shorelines Project, PI: Chela Zabin (Smithsonian Environmental Research Center), co-PIs: Andy Chang (Smithsonian Environmental Research Center), and Karina Nielsen (San Francisco State University).
- 2019 2023 Ocean Protection Council \$1,000,000 Evaluating the performance of California's MPA network through the lens of sandy beach and surf zone ecosystems. PI: Jenifer Dugan (University of California Santa Barbara) co-PIs: Robinette, D (Point Blue Conservation Science), Page, H (University of California Santa Barbara), Garza, J (National Oceanic and Atmospheric Administration Southwest Fisheries), Jarrin, JM (Humboldt State University), Nielsen, KJ (San Francisco State University), Lindquist, K (Greater Farallones Association), Nueman, K (Point Blue Conservation Science), Colwell, M (Humboldt State University), Miller, R (University of California Santa Barbara), Hamilton, S (Moss Landing Marine Laboratories/San Jose State University), Ricker, S (California Department of Fish and Wildlife), Mulligan, T (Humboldt State University).

- 2018 2022 **California State Coastal Conservancy** \$190,000 Nature-based Rocky Habitat Restoration and Education PI: Karina Nielsen (EOS Center, SF State); co-PI: Chela Zabin (Smithsonian Environmental Research Center).
- 2016 2022 **National Science Foundation** \$2,922,930. NSF Research Traineeship (NRT): RIP-TIDES: Research Intensive Pedagogical Training of InterDisciplinary Estuarine Scientists. PI: Nielsen, KJ (San Francisco State University) Co-PIs: Komada, T, Cochlan, W (San Francisco State University). Original Lead PI: Jonathan Stillman
- 2016 2022 National Oceanographic and Atmospheric Administration subaward to Nielsen SFSU \$ \$469,234 CeNCOOS Partnership: Ocean Information for Decision Makers: PIs: Primary contact: Henry Ruhle, Director (CeNCOOS at MBARI); (co-investigators in alphabetic order): R. Bochenek (Axiom Data Science); D. Wendt, R. Walter, K. Davis (California Polytechnic State University); C. Whelan (CODAR Ocean Sensors); F. Shaughnessy, J. Anderson (Humboldt State University); F. Chavez (Monterey Bay Aquarium Research Institute); J. Paduan (Naval Postgraduate School); J. Doyle (Navy Research Laboratory); J. Barth (Oregon State University); K. Nielsen (San Francisco State University); T. Connolly, J. Smith, K. Coale (San Jose State University); J. Largier (University of California Davis); Y. Chao (University of California Los Angeles); R. Kudela, C. Edwards, A. Moore, D. Costa (University of California Santa Cruz)
- 2016 2018 **California Sea Grant** \$271,546 Understanding the role of oyster mariculture on ecosystem health in coastal California: Water quality in Drakes Estero before and after oyster mariculture. PI: Frances Wilkerson (San Francisco State University); co-PIs: Dick Dugdale (SF State), Karina Nielsen (SF State), Alex Parker (California Maritime Academy)
- 2016 2017 San Francisco Estuary Partnership (Environmental Protection Agency) \$69,884. The Ocean's influence on SF Bay: Assessing the Bay's exposure to ocean acidification. PI: Nielsen, KJ (San Francisco State University) Co-PIs: John Largier (University of California Davis) and Phil Trowbridge (San Francisco Estuary Institute) in partnership with the San Francisco Estuary Program (SFEP)
- 2014 2017 **California Ocean Science Trust** \$450,000 The Ecological State of Northern California's Sandy Beaches and Surf Zones: A Baseline Characterization for MPA Assessment. PI: Nielsen, KJ (San Francisco State University); co-PIs: Milligan, T (Humboldt State University); Dugan, JE (University of California, Santa Barbara; Craig, S (Humboldt State University); Laucci, R. (Tolowa Deeni' Nation).
- 2012 2013 **California Sea Grant** \$10,000 Cultivation and molecular identification of Gonyaulacoid dinoflagellates associated with mortalities of abalone. PIs: O'Kelly, C.J. (Friday Harbor Laboratories, University of Washington) & K. J. Nielsen (Sonoma State University).
- 2011 2012 **California Sea Grant** \$10,000 Molecular identity of Gonyaulacoid dinoflagellates associated with mortalities of abalone, urchins and other marine invertebrates in Sonoma County, California, August – September 2011. PIs: O'Kelly, C.J. (Friday Harbor Laboratories, University of Washington) & K. J. Nielsen (Sonoma State University).

- 2011 2016 National Science Foundation \$1,119,999 Collaborative Research: The role of calcifying algae as a determinant of rocky intertidal macrophyte community structure at a meta-ecosystem scale. PIs: Menge, BA (Oregon State University) & Nielsen, KJ (Sonoma State University/ San Francisco State University); co-PIs: Hacker, S & Chan, F (Oregon State University)
- 2011 2016 National Oceanographic and Atmospheric Administration \$10,245,630 (subaward to Nielsen/SSU, then SFSU \$692,201) CeNCOOS: Integrating marine observations to inform decision makers and the general public. PIs: Primary contact: David Anderson, Director (CeNCOOS @MBARI) (preceded by Leslie Rosenfeld); (co-investigators in alphabetic order): Barbara Block (Hopkins Marine Lab), Mark Carr (PISCO, UC Santa Cruz), Yi Chao (Jet Propulsion Lab/UCLA), Francisco Chavez (MBARI), Jim Dovle (Naval Research Laboratory) Chris Edwards (UC Santa Cruz) Oliver Fringer (Stanford), Toby Garfield (San Francisco State / Romberg Tiburon Center), Raphe Kudela (UC Santa Cruz), Rik Kvitek (CSUMB), John Largier (UC Davis / Bodega Marine Lab), Steven Le (Science Applications International Corporation), Erika McPhee-Shaw (Moss Landing Marine Laboratory), Mark Moline (California Polytechnic Institute), Andy Moore (UC Santa Cruz), Hanna Nevins (Marine Wildlife Veterinary Care & Research Center), Karina Nielsen (Sonoma State), Jeff Paduan (Naval Postgraduate School), Frank Shaughnessy (Humboldt State University), Igor Shulman (Naval Research Laboratory), Bill Sydeman (Farallon Institute)
- 2011 2014 **California Ocean Science Trust** \$290,000 Sandy beach ecosystems: Baseline characterization and evaluation of monitoring metrics for MPAs along the south coast of California PI: Dugan, JE (University of California, Santa Barbara; co-PIs: Page, H (University of California, Santa Barbara); Nielsen, KJ (Sonoma State University); Bursek, J (Channel Islands National Marine Sanctuary)
- 2010 2013 **California Ocean Science Trust** \$288,667 Baseline Monitoring of Ecosystem and Socioeconomic Indicators for MPAs along the North Central Coast of California: Sandy Beaches. PI: Karina J Nielsen (Sonoma State University); co-PIs: Steven Morgan (UC-Davis, Bodega Marine Lab), Jenifer Dugan (UC- Santa Barbara, Marine Science Institute).
- 2008 2011 National Oceanographic and Atmospheric Administration \$3,281,529 (\$120,000 to Nielsen/SSU). CeNCOOS: Long-term monitoring of environmental conditions in support of protected marine area management in central and northern California total award. PI: Steven Ramp (Monterey Bay Aquarium Research Institute (MBARI)); Co-PIs: Francisco Chavez (MBARI), Frank Shaughnessy & Greg Crawford (Humboldt State University), Toby Garfield (San Francisco State University), Mitchell Craig (CSU – East Bay), Mark Moline (California Polytechnic State University), Kenneth Coale (Moss Landing Marine Lab), Raphael Kudela (UC- Santa Cruz), John Largier (UC-Davis, Bodega Marine Lab), et al.
- 2007 2010 **National Science Foundation** \$678,398 Collaborative Research: Scaling up from community to meta-ecosystem dynamics in the rocky intertidal - a comparative-experimental approach; PIs: Bruce Menge (Oregon State University)& Karina Nielsen (Sonoma State University); Co-PIs: Sally Hacker (Oregon State University) & Francis Chan (Oregon State University).

- 2006 2009 **California Sea Grant** \$128,000 Collecting Sea Palms: planning for sustainable use in a variable environment; Co-PI: Carol Blanchette (University of California, Santa Barbara)
- 2006 2007 **Center for Integrative Coastal Observation, Research and Education** (**CICORE**) \$50,000 Sonoma State University intertidal zone water quality monitoring; Co-PI: Dan Crocker (Sonoma State University)
- 2002 2003 **National Science Foundation** SGER (Co PI): \$100,000 A shoaling hypoxic zone on the Oregon coast: genesis and mechanisms; PI: Bruce Menge (Oregon State University) Co-PIs: Karina Nielsen, Francis Chan & Jane Lubchenco (Oregon State University)
- 1998 2000 **National Science Foundation** International Postdoctoral Fellowship \$92,900 Upwelling patterns and marine plant-herbivore interactions: Linking benthic and pelagic processes.
- 1997 1998 **American Association of University Women** Dissertation Fellowship \$4,500 The10900 relative importance of nutrients, herbivory and wave exposure in structuring tidepool communities.
- 1997 **National Science Foundation** International Planning Grant \$4,900 Marine macrophytes and grazers: Linking coastal oceanography and rocky intertidal community ecology.
- 1995 1996 University Club Foundation Graduate Fellowship \$5,000
- 1995 *Sigma Xi* Grant-in-Aid of Research \$1,000 Bottom up forces in marine microcosms: An experimental manipulation of nutrients in tidepool communities.

HONORS, SCHOLARSHIPS AND AWARDS

2019	Marin County Board of Supervisors, recognition of ocean climate science
	engagement in proclamation for World Oceans Day
2017	Fellow, California Academy of Sciences
2011	Santa Rosa Chamber of Commerce, Excellence in Education Award
1999	David and Lucile Packard Foundation, Hopkins Marine Station Scholarship
1997	Western Society of Naturalists, Best Paper Award, honorable mention
1996	University Club Graduate Fellowship
1994 - 1997	OSU - Department of Zoology, Research Fund Awards
1993	Phycological Society of America, Croasdale Fellowship
1993	University of Washington, Friday Harbor Labs Scholarship
1992	Sigma Xi
1991	Phi Beta Kappa
1991	Merck Summer Research Scholars Fellowship
1991	Philip Gisses Memorial Scholarship
1990 - 1992	Libby Kohl Banks Scholarship
1990	Rose Weinstein Scholarship
1990	Saul Lyons Scholarship

PUBLICATIONS (PEER-REVIEWED)

- Cheng, B.S., Blumenthal, J., Chang, A.L., Barley, J., Ferner, M.C., Nielsen, K.J., Ruiz, G.M. and Zabin, C.J., 2021. Severe introduced predator impacts despite attempted functional eradication. **Biological Invasions**. https://doi.org/10.1007/s10530-021-02677-3
- Rosenau, N.A., Galavotti, H., Yates, K.K., Bohlen, C.C., Hunt, C.W., Liebman, M., Brown, C.A., Pacella, S.R., Largier, J.L., Nielsen, K.J. and Hu, X., 2021. Integrating High-Resolution Coastal Acidification Monitoring Data Across Seven United States Estuaries. **Frontiers in Marine Science,.** https://doi.org/10.3389/fmars.2021.679913
- Backe, K, Hines, E, Nielsen, KJ, George, D, Twohy, E, Lowry, M. 2021. Effects of sea-level rise and storm enhanced flooding on Pacific harbor seal habitat: a comparison of haulout changes at the Russian and Eel River Estuaries. **Aquatic Conservation: Marine and Freshwater Ecosystems.** https://doi.org/10.1002/aqc.3574
- Menge, B.A., Close, S.L., Hacker, S.D., Nielsen, K.J. and Chan, F., 2020. Biogeography of macrophyte productivity: Effects of oceanic and climatic regimes across spatiotemporal scales. Limnology and Oceanography. https://doi.org/10.1002/lno.11635
- Wilson, J.R., Wilkerson, F.P., Blaser, S.B., Nielsen, K.J. 2020. Phytoplankton Community Structure in a Seasonal Low-Inflow Estuary Adjacent to Coastal Upwelling (Drakes Estero, CA, USA). **Estuaries and Coasts** https://doi.org/10.1007/s12237-020-00792-3
- Close, S.L., Hacker, S.D., Menge, B.A., Chan, F. and Nielsen, K.J. 2020. Biogeography Of Macrophyte Elemental Composition: Spatiotemporal Modification Of Species-Level Traits. **Ecosystems**. doi:10.1007/s10021-020-00484-w.
- Hacker S.D., Menge B.A., Nielsen K.J., Chan F., Gouhier T.C. 2019. Regional processes are stronger determinants of rocky intertidal community dynamics than local biotic interactions. **Ecology**:e02763.
- Saarman E.T., Owens B., Murray S.N., Weisberg S.B., Ambrose R.F., Field J.C., Nielsen K.J., Carr M.H. 2018. An ecological framework for informing permitting decisions on scientific activities in protected areas. **PloS one** 13(6):e0199126.
- Freiwald, J., Meyer, R., Caselle, J.E., Blanchette, C.A., Hovel, K., Neilson, D., Dugan, J., Altstatt, J., Nielsen, K.J. and Bursek, J. 2018. Citizen science monitoring of marine protected areas: Case studies and recommendations for integration into monitoring programs. Marine Ecology 39, p.e12470. doi.org/10.1111/maec.12470
- Chan, F., Barth, J.A., Blanchette, C.A., Byrne, R.H., Chavez, F., Cheriton, O., Feely, R.A., Friederich, G., Gaylord, B., Gouhier, T., Hacker, S., Hill, T., Hofmann, G. McManus, M.A., Menge, B.A., Nielsen, K.J., Russell, A., Sanford, E., Sevadjian, J., Washburn, L. 2017.
 Persistent spatial structuring of coastal ocean acidification in the California Current System. Scientific Reports, 7:2526 Published online 2017 May 31. doi: 10.1038/s41598-017-02777-y.
- Liebowitz, D., K.J. Nielsen, J. Dugan, S. Morgan, D. Malone, J. Largier, D. Hubbard, M. Carr. 2016. Ecosystem connectivity and trophic subsidies of beaches. **Ecosphere** 7(10): e01503. 10.1002/ecs2.1503.
- Kroeker, K., Sanford, E.; Rose, J., Blanchette C., Chan, F., Chavez, F., Gaylord, B., Helmuth, B.,
 Hill, T., Hofmann, G., McManus, M., Menge, B., Nielsen, K.J., Raimondi, P., Russell, A.,
 Washburn, L. 2016. Interacting environmental mosaics drive geographic variation in
 mussel performance and species interactions. Ecology Letters 19:771-779.

- Barner, A.K.*, S. D. Hacker, B. A. Menge & K. J. Nielsen. 2016. The complex net effect of reciprocal interactions and recruitment facilitation maintains an intertidal kelp community. **Journal of Ecology** 104:33-43.
- Murray, S., Weisberg, S., Raimondi, P., S. Ambrose, R., Bell, C., Blanchette, C., Burnaford, J., Dethier, M., Engle, J., Foster, M., Miner, M., Nielsen, K.J., Pearse, J., Richards, D. and Smith, J. 2016. Level of Agreement in Evaluating the Ecological States of West Coast Rocky Intertidal Communities: A Best Professional Judgment Exercise. Ecological Indicators 60:802-814.
- Menge, B.A., T.C. Gouhier, S.D. Hacker, F. Chan and K. J. Nielsen. 2015. Are meta-ecosystems organized hierarchically? A model and test in rocky intertidal habitats. **Ecological Monographs** 85:213-233.
- Heather Tallis, Jane Lubchenco, and 238 co-signatories including K.J. Nielsen. Working together: A call for inclusive conservation. 2014. **Nature** 515:27-28
- Burnaford, J., K.J. Nielsen & S.L. Williams. 2014. Celestial mechanics affect emersion time and patterns of abundance of an ecosystem engineer, the intertidal kelp *Saccharina sessilis*. **Marine Ecology Progress Series** 509:127-136.
- Krenz, C., B.A. Menge, T. L. Freidenburg, J. Lubchenco, F. T. Chan, M. M. Foley & K. J. Nielsen.
 2011. Ecological subsidies to rocky intertidal communities: linear or non-linear changes along a consistent geographic upwelling transition? Journal of Experimental Marine Biology and Ecology 409: 361-370.
- McPhee-Shaw, E., K.J. Nielsen, J. L. Largier & B. A. Menge. 2011. Nearshore Chlorophyll-a events and wave-driven transport. **Geophysical Research Letters** 38
- Thompson, S. A., H. Knoll, C. A. Blanchette & K. J. Nielsen 2010. Population consequences of biomass loss due to commercial collection of the wild seaweed *Postelsia palmaeformis*. **Marine Ecology Progress Series** 413:17-31.
- Sanford, E., M. E. Wood*, K. J. Nielsen. 2010. A non-lethal method for estimation of gonad and pyloric caecum indices in sea stars. **Invertebrate Biology**128:372-380.
- Menge, B. A., F. T. Chan, K. J. Nielsen, E. D. Lorenzo & J. Lubchenco. 2009. Climatic variation alters supply side ecology: impact of climate patterns on phytoplankton and mussel recruitment. **Ecological Monographs** 79:379-95.
- Kavanaugh, M. T.*, K. J. Nielsen, B. A. Menge, F. T. Chan, R. M. Letelier, L. M. Goodrich. 2009. Experimental assessment of the effects of shade on an intertidal kelp: do phytoplankton blooms inhibit growth of open coast macroalgae? Limnology & Oceanography 54:276-288.
- Barth, J. A., B. A. Menge, J. Lubchenco, F. T. Chan, J. M. Bane, A. R. Kirincich, M. A. McManus, K. J. Nielsen, S. D. Pierce & L. Washburn. 2007. Delayed upwelling alters nearshore coastal ocean ecosystems in the northern California Current. Proceedings of the National Academy of Sciences 104:3791-3794.
- Nielsen, K. J., C. A. Blanchette, B. A. Menge & J. Lubchenco 2006. Physiological snapshots reflect ecological performance of the sea palm, *Postesia palmaeformis*, (Phaeophyceae) across intertidal elevation and exposure gradients. Journal of Phycology 42, 548–559.
- Bracken, M. & K. J. Nielsen 2004. Nitrogen loading by invertebrates increases diversity of intertidal seaweeds. **Ecology** 85(10):2828-2836
- Grantham, B. A., F. T. Chan, K. J. Nielsen, D. Fox, J. A. Barth, A. Huyer, J. Lubchenco, and B. A. Menge 2004. Nearshore upwelling-driven hypoxia signals ecosystem and oceanographic changes in the NE Pacific. **Nature** 429:479-754

- Nielsen, K. J. & S. A. Navarrete 2004. Mesoscale regulation comes from the bottom-up: intertidal interactions between consumers and upwelling. **Ecology Letters** 7(1):31-41.
- Nielsen, K. J. 2003. Nutrient loading and consumers: agents of change in open-coast macrophyte assemblages. **Proceedings of the National Academy of Sciences** 100: 7660-7665.
- Wieters, E., D. M. Kaplan, A. Sotomayor, S. A. Navarrete, J. L. Largier, K. J. Nielsen & F. Véliz.
 2003. Spatial and temporal variation in chlorophyll-a with respect to local
 upwelling intensity in central Chile. Marine Ecology Progress Series 249:93-105.
- Nielsen, K. J. 2001. Bottom-up and top-down forces in tidepools: test of a simple food-chain model in an intertidal community. **Ecological Monographs** 71(2): 187-217.
- Nielsen, K. J. & D. R. Franz 1995. The influence of adult conspecifics and shore level on recruitment of the ribbed mussel *Geukensia demissa* (Dillwyn). **Journal of Experimental Marine Biology and Ecology** 188:89-98.

BOOK CHAPTERS

- Blanchette, C.A., M.W. Denny, J.M. Engle, B. Helmuth, L.P. Miller, K.J. Nielsen, and J. Smith. 2016. Intertidal. *In* H. Mooney and E. Zavaleta, (Eds.) **Ecosystems of California**. University of California Press.
- Bakker, J., K.J. Nielsen, J. Alberti, F. Chan, S.D. Hacker, O.O. Iribarne, D.P.J. Kuijper, B.A. Menge, M. Schrama & B.R. Silliman. 2015. Bottom-up and top-down interactions in coastal interface systems. *In* K. LaPierre and T. Hanley (Eds.)**Trophic Ecology:** Bottom-Up and Top-Down Interactions across Aquatic and Terrestrial Systems. Cambridge University Press. pp. 157-200.
- Nielsen, K. J. 2007. Algae, overview. *In* M. Denny and M. S. Gaines, (Eds,), **Encyclopedia of the Rocky Intertidal**. University of California Press.

Administrative Reports, Program Reviews, Proposals

- Nielsen, K.J. 2018, 2019, 2020. Annual Report for the Estuary & Ocean Science Center, San Francisco State University
- Nielsen, K.J. 2017. Estuary & Ocean Science Center: Connecting Science Society and the Sea for a Healthy Planet. Research and Service Organization Proposal, San Francisco State University.
- Nielsen, K.J. 2014, 2015, 2016, 2017 Annual Report for the Romberg Tiburon Center for Environmental Studies, San Francisco State University
- Harvey, J., Lee, C., Nielsen, K.J., Zachos, J. 2016. Institute of Marine Science, University of California, Santa Cruz. Program Review. External reviewer report for University of California, Santa Cruz.
- Nielsen, K.J. 2013. Moss Landing Marine Laboratories M.S. Program Review. External reviewer report for San Jose State University.
- Nielsen, K.J. 2010. Supporting Faculty Research and Scholarship: A Survey of Faculty Needs in Support of Externally Funded Research and Scholarship (2009-2010). A Collaborative project of Academic Affairs and the Faculty Subcommittee on Sponsored Projects, SSU Academic Senate.
- Nielsen, K.J. 2010. Supporting Faculty Scholarship: A Summary of Interviews with the Faculty. A report for the Division of Academic Affairs, Sonoma State University

PUBLICATIONS (OTHER)

Technical Reports

- Galavotti, H., Vasslides, J., Poach, M., Bohlen, C., Hunt, C.W., Liebman, M., Hu, X., McCutcheon, M., O'Donnell, J., Howard-Strobel, K. and Vella, P., 2021. Measuring coastal acidification using in situ sensors in the National Estuary Program (No. EPA-842-R-21001). EPA. <u>https://pubs.er.usgs.gov/publication/70220586</u>
- Sievanen, L, Phillips, J, C Colgan, G Griggs, J Finzi Hart, E Hartge, T Hill, R Kudela, N Mantua, KJ Nielsen, L Whiteman. 2019. California's Coast and Ocean Summary Report. California's Fourth Climate Change Assessment. Publication number: SUMCCC4A-2018-011. <u>http://www.climateassessment.ca.gov/state/docs/20180827-</u> <u>OceanCoastSummary.PDF</u>
- Cope, J., Raimondi, P., Fay, G., Jiao, Y., Nielsen, K., Tissot, B., and White, W. Final report of the scientific and technical review panel: Scientific peer review of proposed recreational red abalone management strategies. California Ocean Science Trust, Oakland, CA. October, 2018. <u>http://www.oceansciencetrust.org/wp-content/uploads/2018/10/AbalonePeerReview_Final_Oct2018.pdf</u>
- Nielsen, K., Stachowicz, J., Carter, H., Boyer, K., Bracken, M., Chan, F., Chavez, F., Hovel, K., Kent, M., Nickols, K., Ruesink, J., Tyburczy, J., and Wheeler, S. Emerging Understanding of the potential role of seagrass and kelp as an ocean acidification management tool in California. California Ocean Science Trust, Oakland, California, USA. January 2018. <u>http://www.oceansciencetrust.org/wp-</u> content/uploads/2018/01/0A-SAV-emerging-findings-report-1.30.18.pdf
- Trowbridge, P., Shimabuku, I., Wheeler, S., Knight, E., Nielsen, K., Largier, J., Sutula, M., Valiela, L., Nutters, H. 2017. Summary of Workshop on Monitoring for Acidification Threats in West Coast Estuaries: A San Francisco Bay Case Study. October 19-20, 2016, San Francisco Estuary Institute, Richmond, CA. <u>http://www.sfei.org/sites/default/files/biblio_files/SFEI%20Full%20OA%20Work</u> <u>shop%20Summary_final.pdf</u>
- Nielsen, KJ, Dugan, JE, Mulligan, T. Hubbard, DM, Craig, SF, Laucci, R. Wood, ME, Barrett, DR, Mulligan, HL, Schooler, N, & Succow, ML. 2017. Baseline Characterization of Sandy Beach Ecosystems along the North Coast of California. Final Report to California Sea Grant and Ocean Science Trust. 166 pp. https://caseagrant.ucsd.edu/sites/default/files/38-Nielsen-Final.pdf
- Ambrose, R.F., Bernstein, B., Anderson, S.S., Carr, M.H., Murray, S.N., Nielsen, K.J., Raimondi, P.T. 2016. Marine Mitigation in California: going beyond traditional approaches, California Ocean Protection Council Science Advisory Team, California Ocean Science Trust, Oakland, California, USA. May 2016.
- Dugan, J.E., Hubbard, D.M., Nielsen, K.J., Altstatt, J. & Bursek, J. 2015. Baseline Characterization of Sandy Beach Ecosystems Along the South Coast of California. Final Report for California Sea Grant and Ocean Science Trust. 113 pp. <u>http://oceanspaces.org/sites/default/files/scmpa-24-final-report.pdf</u>
- Carr, M,H., K.J. Nielsen, J. Prince, P. Raimondi, S.C. Schroeter and B. Tissot. 2014. Final Report of the Science Advisory Committee Scientific and Technical Review of the Survey Design and Methods Used by the California Department of Fish and Wildlife to Estimate Red Abalone (*Haliotis rufescens*) Density. California Ocean Science Trust, California Ocean Protection Council and California Department of Fish and Wildlife. <u>http://calost.org/pdf/science-advising/peer-</u> review/Abalone%20Review%20Final%20Report%20FINAL.pdf

- Nielsen, K.J., S.G. Morgan & J. E. Dugan. 2013. Baseline Characterization of Sandy Beach Ecosystems in California's North-Central Coast Region. **Final Report for the Monitoring Enterprise**. October 14, 2013
- Rogers-Bennett, L., R. Kudela, K. J. Nielsen, A. Paquin^{*}, C. O'Kelly, G. Langlois, D. Crane & J. Moore. 2012. Dinoflagellate bloom coincides with marine invertebrate mortalities in northern California. **Harmful Algae News**
- California MLPA Master Plan Science Advisory Team[#] (2011, January 13). *Methods Used to Evaluate Marine Protected Area Proposals in the North Coast Study region*. Sacramento, CA: Marine Life Protection Act Initiative 31 October 2012, <u>http://www.dfg.ca.gov/mlpa/pdfs/northcoastproposals/evaluationmethods.pdf</u> *#KJN is a co-author and was a member of the Science Advisory Team*
- Nutrients Supply Affects Seaweed Diversity. 2005. **PISCO Coastal Connections** 4:12-13. An annual publication of the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO). <u>http://www.piscoweb.org/files/file/Coastal Connections/PCC4-Final-Booklet.pdf</u>
- Sunlight Shapes Shoreline Ecology. 2005. **PISCO Coastal Connections** 4:12-13. An annual publication of the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO). <u>http://www.piscoweb.org/files/file/Coastal Connections/PCC4-Final-Booklet.pdf</u>

Perspectives, opinions, letters, statements, and blogs

- Domingo, C. Simonis, U., Marzke, R., Burrus, L., Baird Jr., T., Puder, A., Dekens, P., Siong-The, K., Oliphant, A., Hsu, E., Barranco, J., Wright, C., Nielsen, K., Fuse, M., Horvath, L. 2020. Announcing a CoSE Task Force for Anti-Racism. 20 August 2020. <u>https://cose.sfsu.edu/announcing-cose-task-force-anti-racism</u>
- Nielsen, K.J. 2020. Listen, learn, and reset your compass to build an anti-racist future. Anti-Racism Statement. Bayside Newsletter, Estuary & Ocean Science Center, 4 June, 2020. <u>https://eoscenter.sfsu.edu/content/listen-learn-and-reset-your-compassbuild-anti-racist-future</u>
- Hill, TM, Nielsen, KJ, Cloyd, ET, Knight, E. 2018. Why we need #ClimateFriday: Centering discussions on climate change impacts and solutions. Medium.com. November 30, 2018. <u>https://medium.com/@phyllospadix/why-we-need-climatefriday-37e60c9c5585</u>
- Ramirez KS, Berhe AA, Burt J, Gil-Romera G, Johnson RF, Koltz AM, Lacher I, McGlynn T, Nielsen KJ, Schmidt R, Simonis JL. 2018. The future of ecology is collaborative, inclusive and deconstructs biases. **Nature Ecology & Evolution** 2(2):200.
- Nielsen, K.J. 2014. Applying Scientific Thinking to Decision-Making. Perspectives from the Ocean Protection Council – Science Advisory Team -- Part 2. Ocean Spaces blog post, December 8, 2014. <u>http://oceanspaces.org/blog/perspectives-opc-sat-part-2-applying-scientific-thinking-decision-making</u>
- December 15, 2008, Op-Ed, Nielsen, K. J., A bailout plan for ocean ecosystems, **The Ukiah Daily Journal**, Ukiah, CA
- May 1, 2008, Op-Ed, Nielsen, K. J., Don't let sea palms go the way of salmon, **The Mendocino Beacon**, Mendocino, CA
- April 29, 2004, Op-Ed, Nielsen, K. J., Don't miss chance to save our oceans, **The Press Democrat**, Santa Rosa, CA

MEDIA COVERAGE

- June 27, 2018. An acidified San Francisco Bay? No one's studied that yet, by Eric Simons. Bay Nature, <u>https://baynature.org/article/acidified-sf-bay/</u>
- March 15, 2018. BOB and MARI Will Monitor Water Chemistry in the San Francisco Bay, by Karla Lant. Environmental Monitor. <u>https://www.fondriest.com/news/bob-mari-will-monitor-water-chemistry-san-francisco-bay.htm</u>
- March 16, 2018. BOB and MARI Start Monitoring the Bay, San Francisco Estuary Partnership. <u>https://www.sfestuary.org/bob-and-mari-start-monitoring-the-bay/</u>
- January 21, 2018. Radio Interview by Margie Shafer KCBS on climate change and research at the Estuary & Ocean Science Center.
- 2017. At a snail's place: In which the distribution of a common Pacific Coast sea snail explains the underlying logic of the universe, by Eric Simons In WEIRD, UGLY, RARE, a series showcasing the stories of species it's hard to tell stories about. They're weird. They're ugly. They're rare. **Bay Nature.** <u>https://baynature.org/biodiversity/</u>
- October, 25, 2016. Tiburon's Romberg center gets \$3M for master's program on coastal cities, by Mark Prado. **Marin Independent Journal**. http://www.marinij.com/article/NO/20161025/NEWS/161029864
- February 1, 2014. Creating a marine reserve snapshot; collaborative project sets baseline for protected areas, by Will Houston. **The Times-Standard**. <u>http://www.timesstandard.com/ci_25041666/creating-marine-reserve-snapshot-collaborativeproject-sets-baseline</u>
- January 1, 2012. Killer algae on Sonoma coast, by Aleta George, **Bay Nature**. <u>http://baynature.org/articles/jan-mar-2012/ear-to-the-ground/killer-algae-on-sonoma-coast</u>
- October 27, 2011 Radio interview by Cal Winslow, **Mendocino Public Radio (KZYX &Z)**, Mendocino Institute's Environmental Issues mini-series, show covered recent dinoflagellate bloom and associated die-off of abalone and other marine life and discussion of newly established marine protected areas.
- October 13, 2011. Cryptic phytoplankton may hold answer, by Ryan Jacobs, **Point Reyes** Light. <u>http://www.ptreyeslight.com/article/cryptic-phytoplankton-may-hold-answer</u>
- October 3, 2011. Red tide rising: Harmful phytoplankton blooms, by Jennifer Skene, **QUEST** (KQED, San Francisco). <u>http://science.kqed.org/quest/2011/10/03/red-tide-rising/</u>
- September 23, 2011, Killer red tide baffles scientists, by John Upton, **The Bay Citizen**. <u>http://www.baycitizen.org/environment/story/killer-red-tide-baffles-scientists/</u>
- September 23, 2011. What's next for Abalone hunters? by Sam Scott, **Santa Rosa Press Democrat**.

http://www.pressdemocrat.com/article/20110923/articles/110929705

- June 17, 2009. Radio interview by Christina Aanistad, **Mendocino Public Radio (KZYX &Z)**, Evening Local News, segment on conflict between north coast seaweed harvesters and the Marine Life Protection Act.
- October 7, 2005. Could you please pass the Sea Palm? West coast seaweed popular gourmet snack; harvesting regulations limited, by Bob Norberg, **Santa Rosa Press Democrat.**

http://www.sonoma.edu/users/n/nielseka/press/Press Democrat 070CT05.pdf

March 2003, interview appearance on, **Oregon Public Broadcasting: Oregon Field Guide**, segment on Oregon's marine hypoxic zone.

August 7, 2002. Dead marine life signals a sea change, by Jonathon Brinkman, **The Oregonian.**

August 1, 2002. Researchers puzzle over seawater, by Susan Palmer, **The Register-Guard**.

July 31, 2002,. Dead Zone' May Explain Crab Die-Off, by Alison Frost, **Oregon Public** Broadcasting (Oregon Considered).

July 31, 2002. Dead sea life afflicts coastal zone, by Jonathon Brinkman, The Oregonian.

July 31, 2002. Researchers find cause of coastal crab and fish die off, by Joel Gallob, **The Newport News-Times.**

TEACHING EXPERIENCE

UNDERGRADUATE COURSES

Sonoma State University, Department of Biology, Rohnert Park, CA

- A Watershed Year. Lecture, Discussion, and Laboratory Instruction and Curriculum Development for a new, NSF-funded 'freshman year experience' for STEM majors; the course integrates critical thinking, philosophy of science, pre-calculus math and biology; co-taught with Dr. Jeremy Qualls [Physics & Astronomy], Dr. Brigitte Lahme [Mathematics & Statistics], Dr. John Sullins III [Philosophy], Dr. Suzanne Rivoire [Computer Science], Dr. Martha Shott [Mathematics & Statistics] and Dr. Nathan Rank [Biology]. (Fall 2012 Spring 2014)
- Marine Botany (Lecture & Laboratory) (Fall 2011)
- Marine Ecology (Lecture & Laboratory) (Spring 2004 2008, 2010 2014)
- Invertebrate Biology (Lecture & Laboratory) (Fall semesters 2003 2013)
- **Diversity, Structure & Function** (Lecture and Laboratory content including supervision and training of graduate teaching assistants) (Fall 2003 2008; co-taught with Dr. Nathan Rank, Sonoma State University, Department of Biology)
- **Biological Oceanography** (Lecture) (Spring 2005, 2006)
- **Ocean Science Literacy for School & Society.** Lecture & supervision of student teaching in local public elementary schools. (Spring 2006, 2007; co-taught with Dr. Paula Lane [School of Education])
- **Special Studies, Research Experience and Honors Research.** Supervised research experiences for biology majors in my lab group. (Spring 2004 present; 2-7 students every semester)

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Hatfield Marine Science Center & Biology Program, Oregon State University, Newport, OR.

• Marine Ecology (Lecture & Laboratory) (Spring 2000)

GRADUATE COURSES

San Francisco State University, Interdisciplinary Marine & Estuarine Sciences, Tiburon, CA

- **Professional Internship** (Fall 2018, 2019, 2020)
- Writing & Professional Skills Workshop (Spring 2020, 2021)
- Foundations in Global Change in Urbanized Coasts and Estuaries (Fall 2017, 2018, 2019, 2020)

Sonoma State University, Department of Biology, Rohnert Park, CA

- Applied Data Analysis (Spring 2009, 2010, 2011)
- **Professional Skills** (Fall 2008)
- Philosophy of Science (Fall 2006)

• Sound Science and Sound Bites: Ecology in the News (Fall 2004)

GRADUATE STUDENT ADVISEES

- Shea Grady (**NSF Research Trainee**), MS anticipated 2023; Determining complete buffering capacity (total alkalinity) in shallow estuarine habitats.
- Mehak Jain (**NSF Research Trainee**), MS anticipated 2023; Can an eelgrass dominate bay ameliorate coastal acidification in an urban estuary?
- Carl Hendrickson (**NSF Research Trainee**), MS anticipated 2022; Understanding the effect of living shoreline projects on the ecosystem services of eelgrass (*Zostera marina*) to enhance the outcomes of restoration projects. (co-advised with Katharyn Boyer)
- Elizabeth Max, MS anticipated 2022; California mussel condition and trends in relation to climate indices in the rocky intertidal of the Farallon Islands.
- Byron Riggins (**NSF Research Trainee**), MS anticipated 2022; Climate change exacerbates the impacts of small hydropower projects.
- Chelsey Wegener (**NSF Research Trainee**), MS 2021; Reproductive ecology of the rockweed *Fucus distichus* in an urban estuary.
- Ryan Hartnett; MS Fall 2016 (Marine Science, San Francisco State University); Connecting the dots in the Gulf of the Farallones: linking physical ocean conditions to the ecological success of planktivorous predators.
- Athena Maguire; MS 2016 (Biology, Sonoma State University); Ecology of the ecoparasitic pyramidellid snail, *Evalea tenuisculpta* and its host, the red abalone, *Haliotis rufescens*.
- Jill Stokes; MS 2016, (Biology, Sonoma State University); Physiological ecology of the intertidal kelp *Saccharina sessilis*.
- Preston Malm; MS 2016, (Biology, Sonoma State University) Trophic subsidies: links between rocky and sandy shore ecosystems
- Mustafa Gül (International Graduate Fellow, Ministry of National Education, Turkey); MS 2015 (Biology, Sonoma State University); Climate change impacts on interactions between native and exotic marine species.
- Suzanne Garcia; MS not completed (Biology, Sonoma State University); The influence of source waters on phytoplankton community structure in Point Reyes National Seashore and Bodega Bay, California.
- Adele Paquin ; MS 2012 (Biology, Sonoma State University); Patterns of nearshore phytoplankton composition within a northern California upwelling cell.
- Marian Parker; MS 2009 (Biology, Sonoma State University); Reproductive output of *Balanus glandula* and *Chthamalus dalli*: can oceanography trump the effects of competitive exclusion?
- Heather Knoll (**CA Sea Grant Trainee**); MS not completed (Biology, Sonoma State University); *Postelsia* in the face of human exploitation: mechanisms of population persistence.
- Megan Wood (**EPA STAR Fellow**); MS 2008 (Biology, Sonoma State University); Reproductive output of a keystone predator and its preferred prey: the differential influence of oceanographic regime and local habitat.
- Sarah Ann Thompson (**CA Sea Grant Trainee**); MS 2007 (Biology, Sonoma State University); Balancing conservation with commercial use: an experiment to guide sustainable exploitation of an ecologically vulnerable kelp.

GRADUATE STUDENT COMMITTEES

- Tettlebach, Christian; MS anticipated 2021. Effects of climate change on the herbivory of eelgrass (Zostera marina) by an invasive grazer in San Francisco Bay. (MS committee member, Advisor: Katharyn Boyer).
- Abby Mohan; MS 2019. Benefits to community well-being from mangrove restoration activities. (MS committee member, Advisor: Ellen Hines).
- Backe, Karen; MS 2018. Effects of Sea-level Rise and Storm Enhanced Flooding on Pacific Harbor Seal Habitat: a Comparison of Haul-out Changes at the Russian and Eel River Estuaries. (MS committee member, Advisor: Ellen Hines)
- Wilson, Jessica; MS 2028. Spatial and Temporal Changes in Phytoplankton Communities in Drakes Estero, a Low-inflow Estuary. (MS committee member, Advisor: Frances Wilkerson)
- Chenchen Shen; PhD 20XX (Zoology, Oregon State University); *Corallina vancouveriensis*: impact of ocean acidification and consequences for its role as an ecosystem engineer; (PhD Committee member; Advisor: Bruce Menge)
- Letzing, Sandy; MS 2013 (Marine Resource Management, Oregon State University); Characterizing the response of coralline algae to ocean acidification and nutrient changes in the California current system. (MS Committee member; Advisor: Francis Chan)
- Joshua Cutler; MS 2012(Biology, Sonoma State University); Behavioral plasticity of female northern elephant seals drive fine-scale foraging success (MS Committee member; Advisor: Dan Crocker)
- Frederique Lavoipierre; MS 2011 (Biology, Sonoma State University); Effects of floral resources and local environment on tri-trophic interactions (MS Committee member; Advisor: Nathan Rank)
- Betsy Kelso; MS 2011 (Biology, Sonoma State University); Sex differences in fuel use and metabolism during development in fasting northern elephant seals (MS Committee member; Advisor: Dan Crocker)
- Meghan Skaer; MS 2009; (Biology, Sonoma State University); Evaluating the influence of cattle grazing on a coastal prairie in central California (MS Committee member; Advisor: Hall Cushman)
- Catherine Hare; MS 2010 (Biology, Sonoma State University); Algal culturing using wastewater and potential for production of biodiesel. (MS Committee member; Advisor: Michael Cohen)
- Dawn Graydon; MS 2009 (Biology, Sonoma State University); Ecology and management of an endangered butterfly: the importance of host plant characteristics, exotic plants and interactions with ants (MS Committee member; Advisor: Hall Cushman)
- Lovissa Sonnerstedt; MS 2008 (Biology, Sonoma State University); Physiological ecology of Elephant Seals (MS Committee member; Advisor: Dan Crocker).
- Emi Yamamoto; MS 2008 (Biology, Sonoma State University); Characterization of Mycophagous Amoebae Strain ANN04-395 and its Potential for Biocontrol of *Phytophthora ramorum* (MS Committee member; Advisor: Michael Cohen)
- Michele Early; MS pending (Biology, Sonoma State University); Evaluating the influence of biotic and abiotic factors on valley oak distributions in the Santa Rosa Plain, California (MS Committee member; Advisor: Caroline Christrian)
- Michelle Cooper; MS 2006 (Biology, Sonoma State University); The effects of recreation on the dispersal of an exotic forest pathogen (MS Committee member; Advisor: Hall Cushman).

- Joan Schwann; MS 2006 (Biology, Sonoma State University); Influence of goat grazing on invasive species in vernal pools (MS Committee member; Advisor: Hall Cushman).
- Rich Hunter; MS 2006 (Biology, Sonoma State University); Development and evaluation of a model incorporating spatial and temporal variability in a plant-pathogen invasion: Spread of *Phytophthora ramorum* in California landscapes (MS Committee member; Advisor: Ross Meentemeyer, Geography).
- Kristina Stanton; MS 2006 (Institute of Interdisciplinary Studies, Sonoma State University); Ecology education: a case study of a fourth grade tide pool and conservation experience (MS Committee member; Advisor: Paula Lane, School of Education).
- Maria Kavanaugh; MS 2005 (Zoology, Oregon State University); Phytoplankton shading of Benthic Macrophytes: Implications for Community Structure (MS Committee member; Advisor: Bruce Menge).
- Melissa Foley; PhD 2009 (Ecology & Evolutionary Biology, University of California, Santa Cruz) Effect of terrestrial inputs on marine communities (Qualifying Exam Committee Member; Advisor: Pete Raimondi).

TEACHING ASSISTANT EXPERIENCE

Hatfield Marine Science Center & Biology Program, Oregon State University, Newport, OR.

- Marine Ecology (1994, 1997, 1998; Bruce Menge, instructor)
- Invertebrate Zoology (1994, 1997; Sylvia Yamada, instructor)
- **Marine Phycology (**Full responsibility for lab exercises; 1995, *Carol Blanchette*, instructor; 1997, *Kathy Van Alstyne*, instructor)

Biology Program and Department of Zoology, Oregon State University, Corvallis, OR

- General Biology (1992-1993)
- Human Anatomy and Physiology (1993-1994)

OTHER TEACHING EXPERIENCE

Supervisor, undergraduate research assistants, Department of Zoology, Oregon State University, Corvallis, OR (September 1993- June 1998)

- **Biology Tutor**, Peer Tutoring Program, Brooklyn College City University of New York (September 1990 - June 1992)
- **Exhibitor and Software Demonstrator**, PC-ORD: Multivariate Analysis of Ecological Data (Ver. 2.0), MjM Software, Ecological Society of America, August 1995, Snowbird, Utah.
- Assistant to the Director of Public Programs and Nature Walk Guide, The Brooklyn Center for the Urban Environment, Prospect Park, Brooklyn, NY (March 1987- June 1992).

WORKSHOPS (*organizer/co-organizer)

- *Ocean Protection Council SF Bay Academic Roadshow. Lightning talks, networking, and engagement with the Ocean Protection Council, Ocean Science Trust and California's two Sea Grant programs (California Sea Grant and USC Sea Grant). March 5, 2020, Estuary & Ocean Science Center - San Francisco State University, Tiburon, CA.
- Integrated Ocean Observing for a Changing California Coastline. Presenter: Nearshore & estuarine ecosystem health. Organizer: Southern and Central and Northern California Ocean Observing Systems workshop. November 19, 2019. Sacramento, CA

- **Bay Beaches Briefing.** Organized by the State Coastal Conservancy. Many environmental partners, agencies, and local landowners in the Bay Area are considering coarse grain beach restoration designs to help adapt to sea level rise and protect shorelines from erosion. Both natural and restored coarse grain beaches can include different grain sizes (sand, pebble, cobble, gravel, rock) as well as vegetation and other natural features. Bay beaches are being incorporated into living shorelines approaches and have been prioritized for more testing and study in several regional projects including SF Bay Subtidal Habitat Goals, Baylands Ecosystem Goals Update, and SF Bay Adaptation Atlas. Many groups are helping to address data gaps and working on innovative assessment and planning projects to better understand beach foreshore/backshore dynamics; engineering and nature-based design considerations; and developing conceptual restoration designs. Presenter: *EOS Center: Rocky intertidal and coarse beach design.* May 21, 2020, virtual meeting (via Zoom).
- Living Shorelines & Resilience in the SF Bay Area. Organized by: San Francisco Bay and Outer Coast Sentinel Site Cooperative. These workshops provide an introduction to the living shorelines design approach, and share information about the state of the science and best practices around living shorelines (i.e. nature-based or green infrastructure) shoreline adaptation strategies. These workshops are geared towards San Francisco Bay Area professionals who work or may work in the near future on shoreline adaptation projects in various capacities, including land and natural resource managers, scientists, municipal and regional planners, consultants, engineers, community conservation organizations, and key community leaders. Panel presenter: *Perspectives on Living Shorelines*. March 1st, 2019, Bay Area Metro Center, Yerba Buena Room, 375 Beale St, San Francisco 94105
- Marin County Sea Level Rise Adaptation Workshop. Hosted by: Marin County's Sea Level Rise: C-SMART and BayWAVE, Drawdown: Marin, and the California State Coastal Conservancy. Presentation: Estuary & Ocean Science Center shoreline restoration & adaptation. Mill Valley, CA March 21st, 2019.
- *Monitoring for Acidification Threats in West Coast Estuaries: A San Francisco Bay Case Study. Organized by: San Francisco Estuary Institute; Romberg Tiburon Center for Environmental Studies, San Francisco State University; Coastal and Marine Sciences Institute, University of California Davis; Southern California Coastal Water Research Project Authority; U.S. Environmental Protection Agency; San Francisco Estuary Partnership; and California Ocean Science Trust. Funding provided by: U.S. Environmental Protection Agency through the San Francisco Estuary Partnership; Regional Monitoring Program for Water Quality in San Francisco Bay; California Ocean Science Trust; and California Sea Grant. San Francisco Estuary Institute, Richmond, CA. October19-20, 2016.
- **Developing Principles & Good Practice for Expert Judgments** (sponsored by the MPA Monitoring Enterprise) National Center for Ecological Analysis and Synthesis (NCEAS) Santa Barbara, CA, January 25-26, 2012
- *Understanding and Developing Recommended Responses to Harmful Algal Bloom (HAB) Events in California (sponsored by CA Ocean Science Trust and CA Sea Grant, with meeting space donated by Monterey Bay Aquarium Research Institute). January 11, 2012.
- In Pursuit of Bio-Criteria for Evaluating the Condition of Rocky Intertidal Communities, Workshop II (sponsored by the University of Southern California

Sea Grant Program with Assistance from the Bureau of Ocean Energy Management, Regulation and Enforcement). February 2012. Invited participant. Southern California Coastal Water Research Project, Costa Mesa, CA.

- In Pursuit of Bio-Criteria for Evaluating the Condition of Rocky Intertidal Communities, Workshop I (sponsored by the University of Southern California Sea Grant Program with Assistance from the Bureau of Ocean Energy Management, Regulation and Enforcement). March 2010. Invited participant. Wrigley Marine Science Center (University of Southern California), Catalina Island.
- *Los Fondos de Estudios Avanzados en Areas Prioritarias (FONDAP) Comisión Nacional de Investigación Científica y Tecnológica (CONICYT) Workshop on Marine Primary Productivity, ECIM, Universidad Católica de Chile, Las Cruces, Chile, May 1999. Presentation: Nielsen K.J. 1999. Growth and abundance patterns of marine phototrophs along the central Chilean coast.
- Andrew J. Mellon Foundation Working Group, ECIM, Universidad Católica de Chile, Las Cruces, Chile, December 1998. Presentation: Nielsen, K. J. 1998. Temporal and spatial variation in patterns of upwelled nutrients: How might oceanographic climate play a role in structuring algal assemblages in temperate upwelling ecosystems?

SERVICE

PROFESSIONAL SERVICE - CURRENT

- May 2020 present. Trustee, **California Ocean Science Trust**, Board of Trustees. <u>https://www.oceansciencetrust.org/</u>
- January 2019 present, Scientific Advisory Committee Member, **Point Blue Conservation** Science. <u>https://www.pointblue.org/</u>

PROFESSIONAL SERVICE - PAST

- September 2014 April 2022, Board Member, **San Francisco Bay National Estuarine Research Reserve Management Advisory Board.**
- February 2008 April 2022, **California Ocean Protection Council Science Advisory Team**. <u>https://www.opc.ca.gov/science-advisory-team/</u>
- February 2010 April 2022, Governing Council, **Central & Northern California Ocean Observing System**; <u>https://www.cencoos.org/organization-overview/staff-governing-council/</u>
- January 2020 December 2021. President, **Western Association of Marine Laboratories**. <u>http://waml.naml.org/</u>
- January 2020 December 2021. Treasurer, **National Association of Marine** Laboratories. <u>http://www.naml.org/</u>
- January 2020 December 2021 Executive Committee, **CSU Council on Ocean Affairs,** Science & Technology.
- February 2018 December 2019. Co-Lead **Master Plan for the Romberg Tiburon Campus**, San Francisco State University <u>https://plan.sfsu.edu/rtcmp</u>
- January 1, 2018 December 31, 2019. President-Elect, **Western Association of Marine** Laboratories. <u>http://waml.naml.org/</u>
- January 1, 2018 December 31, 2019. Chair, Executive Committee Chair, CSU Council on Ocean Affairs, Science & Technology.
- September 2016 Strategic Planning Committee member, **Shoals Marine Laboratory**.

- June 11, 2015 May, 2020. Liaison to the **Ocean Science Trust Board of Trustees** for the Ocean Protection Council Science Advisory Team.
- September 2013 –2017, Co-Chair California Ocean Protection Council Science Advisory Team; <u>https://www.opc.ca.gov/science-advisory-team/</u>
- August 2013 June 2014, Scientific Advisory Committee, Red Abalone Density Estimates, **California Department of Fish and Wildlife and Ocean Science Trust;** http://calost.org/science-advising/?page=ongoing-reviews
- September 2012 2018, Scientific Working Group, Research in Marine Protected Areas, California Department of Fish and Wildlife and California Ocean Protection Council Science Advisory Team
- June 2012- 2016, Editorial Board, Journal of Phycology.
- January 2012 2013, Policy Committee, Phycological Socienty of America
- January 2012, co-organizer with Raphael Kudela (University of California, Santa Cruz) and administrative support from Errin Kramer-Wilt (Ocean Science Trust), **Understanding and Developing Recommended Responses to Harmful Algal**

Bloom (HAB) Events in California (sponsored by CA Ocean Science Trust and CA Sea Grant, with meeting space donated by Monterey Bay Aquarium Research Institute). January 11, 2012. <u>http://calost.org/resources/?page=workshops</u>

- May 2012, External Program Reviewer, **Moss Landing Marine Laboratories, San Jose State University**, M. S. Program.
- September 2009 January 2011, Scientific Consultant & Grant Writer, **Noyo Center for Science and Education at Fort Bragg.** Collaborative project: City of Fort Bragg and Sonoma State University to create a nature interpretive and marine research center. Worked with City staff, Susan Lohr (private consultant), Claudia Luke (SSU Field Stations and Nature Preserves), Sheila Semens (California Coastal Conservancy), Saeid Rahimi (Interim Dean, School of Science and Technology, SSU) to develop a plan gifting SSU land, design plans and phase 1 construction of the *Noyo Center* <u>http://city.fortbragg.com/pages/viewpage.lasso?pagename=4%7CMarine%20Science%20Institute</u>
- September 2010 January 2011, **co-chair** with Claudia Luke, Director, Sonoma State University Preserves, **SSU Ad Hoc Committee on Academic Enhancement Opportunities** (Noyo Center for Science and Education at Fort Bragg).
- December 2009 2010, **California Marine Life Protection Act Initiative Science Advisory Team** (North Coast); <u>http://www.dfg.ca.gov/marine/mpa/ncsat.asp</u>
- January 2009, symposium organizer, "Marine Ecological Theory in Practice: Informing Marine Conservation Strategies in the 21st Century", **Internation Temperate Reef Symposium**, Adelaide, Australia
- July 2007 September 2008, **California Marine Life Protection Act Initiative Science Advisory Team** (North-Central Coast); <u>http://www.dfg.ca.gov/marine/mpa/mpsat.asp</u>
- October, 2006. Northern California Forum for Diversity in Graduate Education. Invited panelist. Mills College, Oakland, CA.
- June 2003, symposium organizer, "Linking Algae, Oceanography and Marine Ecology", **Phycological Society of America**, Gleneden Beach, OR.
- February 2003, scientific reviewer, "Life in a Tide Pool" by Steven Otfinosko, **Newbridge Educational Publishing**, New York, NY.
- October 2002, invited speaker, **Understanding Marine Protected Areas (MPAs) and Marine Reserves: Scientific Realities and Public Perceptions,** A Workshop for Oregon Media, sponsored by **Communication Partnership for Science and the**

Sea (COMPASS), Ocean Wilderness Network, SeaWeb, Oregon State University & PISCO. The Oregon Ocean: A Nature Tour. LeSells Stewart Center, Corvallis, OR

September 2000 -2002, scientific advisory panel, **Oregon State Department of Parks and Recreation**, Monitoring protocol for the first permit issued for the commercial collection of seaweeds in Oregon.

- November 2000, co-instructor (with Gary Allison), **SAS Workshop: Elementary Statistics and Data Manipulation using SAS Software**, training workshop for graduate students and lab technicians, Lubchenco - Menge lab group, Oregon State University.
- June 1997, played role of 'Intertidal Ecologist' for **Math in the Middle of Nature** (educational video funded by **NSF** and **South Carolina Educational Television**)
- October 1996 & 1995, Panelist, Life in Graduate School, Symposium on Graduate Study in Science for Undergraduate Women, Oregon State University, Corvallis, OR
- February 1995, Symposium Organizer, "Science and Society," **Pacific Ecology Conference**, Oregon Institute of Marine Biology, Charleston, OR

UNIVERSITY COMMITTEES

- August 2020 April 2022, **Academic Senate**, Senator for the College of Science & Engineering, and member of the Strategic Issues Standing Committee, San Francisco State University
- August 2014 April 2022, **Science Council**, College of Science & Engineering, San Francisco State University.
- March 2021- May 2021, Vice President for Administration and Finance, **Administrative Search Committee**, San Francisco State University.
- July 2020 November 2020. Ad Hoc Anti-Racism Committee, College of Science & Engineering, San Francisco State University
- August 2017 July 2018, **University Research Council**, San Francisco State University.
- October 2016-January 2017, Co-chair, Executive Director of Government Relations and Community Relations, **Administrative Search Committee**, San Francisco State University.
- August 2013 August 2014, **Budget Committee**, Department of Biology, Sonoma State University.
- September 2011- August 2014, Internal Advisory Group, S³: Stepping up STEM at Sonoma State University, NSF STEM Talent Expansion Program (STEP).
- August 2013 December 2013, **Faculty Search Committee**, Department of Biology, Sonoma State University.
- August 2011 December 2011, **Director of the Office of Sponsored Programs Search Committee**, Faculty Affairs, Sonoma State University.
- August 2012 May 2013, **Department of Biology Reappointment, Tenure and Promotion Committee,** Sonoma State University.
- May 2010 December 2011, **Chair, Department of Biology Reappointment, Tenure and Promotion Committee,** Sonoma State University.
- August 2008 January 2009, **Director of the Office of Sponsored Programs Search Committee**, Faculty Affairs, Sonoma State University.
- August 2007 December 2007, **Faculty Search Committee**, Department of Biology, Sonoma State University.
- August 2007 May 2009, **Chair, Faculty Subcommittee on Sponsored Programs**, Sonoma State University.

January 2006 – May 2007 & August 2000 – May 2011, **Faculty Subcommittee on Sponsored Programs**, Sonoma State University.

- August 2004 May 2007, **Biology Department Graduate Committee**.
- August 2006 May 2008, **Chair, Budget Committee**, Department of Biology, Sonoma State University.
- September 2005 2009, **Budget Committee**, Department of Biology, Sonoma State University.
- March 2005 May 2006, **Information Technology Strategic Planning Committee**, Sonoma State University.
- August 2006 May 2007, **School of Science & Technology Elections Committee,** Sonoma State University.
- August 2004 May 2006, **Chair, School of Science & Technology Elections Committee,** Sonoma State University.
- August 2005 May 2006, Chair, Biology Department Computer Committee.
- August 2004 May 2005 & August 2006 May 2007, **Biology Department Computer Committee.**
- February 2004, **International Programs**, Faculty interviewer for CSU's statewide study abroad program; selection of SSU students to advance to state-wide selection process.
- September 1995– June 1996, Graduate Student Representative, **Graduate Council, Oregon State University**, Corvallis, OR
- September 1993– 1998, **Graduate Student Welfare Committee**, Department of Zoology, Oregon State University, Corvallis, OR
- June 1994–February 1995, Chair of Steering Committee, **Pacific Ecology Conference**, Oregon Institute of Marine Biology, Charleston, OR

INVITED PRESENTATIONS

SCIENTIFIC MEETINGS

- Nielsen, K.J., 2019. Meeting of waters in a time of change. **Connections between the SF Bay & Greater Farallones Sanctuary Symposium.** Estuary & Ocean Science Center - Bay Conference Center, Tiburon, CA October 16, 2019
- Nielsen, K. J. 2019. San Francisco Bay is a Hope Spot for people and ocean wildlife (Zooming Out to the Full System, plenary presentation). 14th Biennial State of the San Francisco Estuary Conference. Scottish Rite Center in Oakland, CA. October 21 22, 2019.
- Nielsen, K. J. 2015. Rock, sand, water: meta-ecosystems at the land-sea interface. **Western Society of Naturalists, Presidential Symposium: Global Change Marine Ecology** (Gretchen Hoffman, Organizer). Sacramento CA. November 5-8, 2015.
- Nielsen, K. J. 2012. Synopsis of the Sonoma Harmful Algal Bloom(HAB) Event.
 - Understanding and Developing Recommended Responses to Harmful Algal Bloom (HAB) Events in California, Scientific Workshop hosted by the Ocean Science Trust and CA Sea Grant. Monterey Bay Aquarium Research Institute, Moss Landing, CA. January 11, 2012.
- Nielsen, K. J. 2008. Low Recruitment Success From A Large, Competent Larval Pool: Is Negative Selection Or Habitat Choice To Blame? Western Society of Naturalists, Presidential Symposium: Women in Marine Biology: Personal Perspectives from the Field (Kathy-Ann Miller, organizer), Vancouver, British Columbia, Canada, 6-9 November 2008.

- Nielsen, K. J. 2007. Intercepting light: the key to understanding interactions among, and the contributions of, benthic and pelagic photosynthesizers in highly productive, nearshore ecosystems. **PISCO Scientific Symposium**, Corvallis, OR 10-13 December 2007.
- Nielsen, K. J. 2006. Macroalgae reveal the underappreciated role of resources in structuring benthic marine communities Phycological Society of America, mini-symposium: The Experimental Ecology - Macroalgae Connection (Robert Paine, organizer), Juneau AK, 7-12 July 2006.
- Nielsen, K. J., P. Halpin, T. Freidenberg, B. A. Menge & J. Lubchenco. 2004. Grazer-alga interactions: Glimpses of generality across temperate rocky shores. Geographical Ecology: Variation in and Control of Species Interaction Intensity over Regional and Global Scales, Symposium (Bruce Menge, organizer), Ecological Society of America Annual Meeting, Portland, OR August 2004.
- Grantham, B., K. J. Nielsen, & F. Chan 2002. Hypoxia and enrichment of inshore waters at 44.3N. **U.S. GLOBEC NEP-CCS SI Meeting,** Oregon State University, Corvallis, OR. 19-21 November, 2002.
- Nielsen, K. J., P. Halpin, T. Freidenberg & B. A. Menge 2000. Upwelling, macrophytes, and herbivory in Oregon, New Zealand and Chile. PISCO - Mellon Symposium: Dynamics of Pacific Coastal Upwelling Ecosystems, Oregon State University, Corvallis, OR, 14-20 December 2000.
- Blanchette, C., T. Freidenburg, K. Nielsen & P. Halpin 2000. Bottom-up effects on macrophyte assemblages in relation to upwelling intensity. PISCO - Mellon Symposium: Dynamics of Pacific Coastal Upwelling Ecosystems, Oregon State University, Corvallis, OR, 14-20 December 2000.
- Sotomayor, A., E. Wieters, D. Kaplan, S. Navarrete & K. J. Nielsen 2000. Spatial and temporal variation in chlorophyll-a on the central coast of Chile. **PISCO - Mellon Symposium: Dynamics of Pacific Coastal Upwelling Ecosystems**, Oregon State University, Corvallis, OR, 14-20 December 2000.
- Nielsen, K. J. & K.L. Van Alstyne, 1997. Ecological effects of harmful algal blooms on benthic marine communities. Red Tides and Harmful Algal Blooms: Evidence of Ecosystem Reorganization Symposium (Michelle Wood, organizer), Society for Conservation Biology Annual Meeting, Victoria, B. C., Canada, June 1997.

UNIVERSITY/RESEARCH SEMINARS

- Nielsen, K.J. & J. Largier. 2019. Monitoring ocean-shed & watershed influences on the carbonate chemistry of SF Bay, **San Francisco Estuary Institute**, Richmond, CA. March 2019.
- Nielsen, K.J., 2018. Bringing an ocean perspective to an urban estuary. **Darling Marine** Laboratory, University of Maine, Walpole, MN, May 2018.
- Nielsen, K.J., 2015. Community structure and cross-ecosystem connectivity: the ecology of sandy beaches on California's north-central coast. Department of Earth & Climate Science, **San Francisco State University**, February 2015
- Nielsen, K. J., 2012. Synoptic forcing and local scale dynamics of surfzone phytoplankton in the northern California Current Ecosystem over 9 years and 8 degrees of latitude. **Humboldt State University,** December 2013.
- Nielsen, K. J., 2012. Phytoplankton in the surfzone: more than just food for filter feeders. **California State University, Fullerton**. January 2012.

- Nielsen, K. J., 2010. Reproductive output from the intertidal: spatial and temporal variation of strongly interacting species. **Moss Landing Marine Laboratory**, April 2010.
- Nielsen, K. J. 2006. Macroalgae reveal the underappreciated role of resources in structuring benthic marine communities. **Romberg Tiburon Center for Environmental Studies, San Francisco State University**, October 2006.
- Nielsen, K. J. 2005. Making a life from marine ecology and conservation; or how I got an office with an ocean view. **Santa Rosa Junior College** Biology Forum. May 2005.
- Nielsen, K. J., F. Chan, B. Grantham, J. Barth, A. Huyer, D. Fox, B. Menge & J. Lubchenco 2005. Upwelling-driven Hypoxia and Ecological Perturbation in the California Current.
 Bodega Marina Laboratory, University of California, Davis, University of California, February 2005
- Nielsen, K. J., S.A. Thompson*, M. Parker*, K. Lehmann*, R. Kalmoni* & A. White. 2005. Sea palms and barnacles: Research on slimy and spineless seashore denizens enlivens student learning. Faculty Exposition of Scholarship & Sponsored Research, **Sonoma State University**, Rohnert Park, CA. April 2005.
- Nielsen, K. J. 2004. Nutrients, upwelling and herbivory on temperate rocky shores: Disentangling bottom-up from top-down in a marine ecosystem. **Humboldt State University** Biology Seminar Series. October 2004.
- Nielsen, K. J. 2003. Capturing the light fantastic: tidal and oceanographic influences on intertidal algae.
 - Bodega Marine Laboratory, University of California, Davis, September 2003
 - Sonoma State University, Department of Biology, October 2003.
- Nielsen, K. J. 2002. Environmental context sets the stage: role reversals by invertebrate consumers in marine ecosystems. **Sonoma State University**, Department of Biology, December 2002.
- Nielsen, K. J., B. Grantham & F. T. Chan. 2002. Hypoxia, anoxia and marine 'dead zones': what's natural and what's not? **Western Oregon University**, Department of Biology, November 2002.
- Nielsen, K. J. 2002. Seaweeds, sunshine and shades: micro- and meso- scale influences on intertidal plants. **Oregon Institute of Marine Biology, University of Oregon**, November 2002.
- Nielsen, K. J. 2001. From tide pools to rocky reefs nutrient supply influences community structure in upwelling ecosystems.
 - State University of New York, Stony Brook, December 2001
 - Brooklyn College, City University of New York, December 2001
- Nielsen, K. J. 2001. Bottom-up forces shape the abundance and diversity of intertidal macroalgae in upwelling ecosystems of North and South America. **San Diego State University, Department of Biology**, March, 2001.
- Nielsen, K. J. 2000. Upwelling, herbivory, and algal productivity: the influence of bottom-up forces on rocky shores in central Chile. **Departamento de Ecologia, Universidad Católica de Chile**, Santiago, Chile, August 2000.
- Nielsen, K. J., 1999. Producción Primaria en el Oceano (Primary Production in the Ocean; delivered in Spanish). Guest lectures for Marine Ecology course (Miriam Fernandez, Instructor), Departamento de Ecologia, Universidad Católica de Chile, Santiago, Chile, July 1999.

PUBLIC PRESENTATIONS

- Nielsen, K.J., Boyer, K, Iselin, J., Benner, JD., Hanson, L. 2021. Bay Visions 2021: The Power of Plants Will Protect the Bay. Piedmont Garden Club, Woodside-Atherton Garden Club, Marin Garden Club, Hillsborough Garden Club, Orinda Garden Club, and Carmel-By-the-Sea Garden Club. **Affiliates of the Garden Club of America**. Zoom webinar. January 13, 2021.
- Nielsen, K.J., 2020. Blue Carbon: Ocean Climate Connections and Blue Solutions. **Rotary Climate Action Team, San Francisco Rotary Club**. Virtual presentation (via Zoom). November 19, 2020.
- Nielsen, K.J., 2020. Moderator, *Picture A Scientist* Film Screening and Panel Discussion.
 College of Science & Engineering, San Francisco State University. Sponsored by Women in Science & Engineering (WISE), EOS Center (Estuary & Ocean Science Center), NSF IT Catalyst Grant to SF State. Panelists: Carmen Domingo, Diane Harris, Yadira Ibarra, Amanda Johnson, Tomoko Komada, Leora Nanus, Imani Robinson. San Francisco State University, virtual presentation (via Zoom). October 26, 2020.
- Iselin, J. & K.J. Nielsen 2020. The art and science seaweed: the beauty and intrigue of our Pacific Coast seaweeds. **Great Mother Conference, West Coast Gathering**, 2020. Saint Dorothy's Rest, Camp Meeker, CA. February 21–23, 2020
- Iselin, J. & K.J. Nielsen 2019. Seaweed Soirée! **Greater Farallones National Marine Sanctuary Association.** The Bay Model, Sausalito, CA. November 16, 2019.
- Nielsen, K.J. 2019. Hope, innovation + conservation for a changing ocean. *Keynote speaker*. **Noyo Center for Marine Science**. September 15, 2019. Fort Bragg, CA.
- Nielsen, K.J. 2019. Climate Adaptation + Conservation in San Francisco Bay: Resilience, Adaptation and Managed Retreat. **Rotary International**, Petaluma, CA. August 14, 2019.
- Nielsen, K.J. 2019. Predicting, detecting, and preparing for increasing acidification. Panel presentation moderated by Alexis Valauri-Orton. Co-panelists: Jan Newton, Nichole Price, Joseph Salisbury, Brett Veerhusen. **Capitol Hill Ocean Week, National Marine Sanctuaries Association**. June 4-6, 2019.
- Nielsen, K.J. 2016. From the Sierras to the Sea. **Golden State Waters Action Summit: San Francisco Bay and the World Ocean**, The Bay Institute, San Francisco Belle , Pier 3, Embarcadero, San Francisco, CA. April 13-14, 2016.
- Nielsen, K.J., 2015. Coastal Marine Ecosystems. Threatened Oceans Damaged Habitat and Plastic Pollution, **Environmental Forum of Marin Lecture Series**, **The Bay Model**, Sausalito, CA. February 28, 2015.
- Nielsen, K.J. 2014. From Cod Packing to Climate Change: The Past, Present and Future of the Romberg Tiburon Center for Environmental Studies. **Belvedere Tiburon Library**, **Adult Evening Lecture Series**, Tiburon, CA. September 11, 2014.
- Nielsen, K. J. 2013. Looking After the Big Blue: Now and Seven Generations Forward. **No Name Women's Group**, Odd Fellows Pacific Hall, Santa Rosa, CA. March 27, 2013.
- Nielsen, K. J. 2011. Marine Biodiversity of California's Seashore. **Bioforum Lecture Series.**, California Academy of Sciences, San Francisco, CA March 11, 2011.
- Nielsen, K. J. 2011. Coastal Waters. The Mendocino Coast: An Eco-communitarian Conference. **The Mendocino Institute**. Caspar, CA. February 18-20th 2011.
- Nielsen, K. J., 2010. What is an Ocean Ecosystem? St. Michael's Episcopal Church, Fort Bragg, CA & Humboldt Area Foundation Conference Center Eureka, CA **(sponsored by the California Ocean Science Trust & COMPASS (Communication Partnership for Science and the Sea)**, February 9 & 10, 2010.

- Nielsen, K. J., 2010. Sustainable seafood? Says who? **The Sustainability Lecture series**, **University Library & Schulz Information Center, Sonoma State University**, March 2010.
- Nielsen, K. J. 2007. Shifting Seascapes. Library Lecture Series: Citizens Of The World: On Common Ground? Schulz Information Center, Sonoma State University, May 2007.
- Nielsen, K. J. 2002. The mysterious hypoxic zone off Oregon's coast. **15th Annual Coast Conference, Oregon Shores Conservation Coalition and Coast Watch,** Newport, OR, October 2002.
- Nielsen, K. J. 2000. Ecology of intertidal seaweeds. **13th Annual Coast Conference**, **Oregon Shores Conservation Coalition and Coast Watch, Hatfield Marine Science Center**, Newport, OR, October 2000.
- Nielsen, K. J. 1997. Women doing science: past and present. Keynote Address, **South Coast Saturday Academy of the South-Western Oregon Youth Association Boys' and Girls' Club's 7th Annual Women in Science Careers Day, Oregon Institute of Marine Biology**, Charleston, OR, February 1997.

UNIVERSITY ADMINISTRATION AND PLANNING MEETINGS

- Nielsen, K.J. 2019. Climate change, sea change & solutions for our future. **SF State Campus Leadership Forum**, San Francisco State University, November 19, 2019.
- Maloney, B., Nielsen, K.J., Martinez, M., and Foster, B. 2019. Designing a campus that invites underrepresented voices. **Society of College and University Planning, Pacific Regional Conference** |**The Role of Discourse Today**. University of Colorado Boulder, Boulder, CO, March 27-29, 2019.
- Anthes, J., Nielsen, K.J., Uhlig, A., Raak, L., Maxfield, C., Foster, B., Maloney, B. 2018. What good looks like: The Living Community Challenge and campus master planning. CSU Facilities Management Conference, Building Collaborative Communities: Navigating Challenges, Charting Innovations. Monterey, CA, October 28-31, 2018

CONTRIBUTED PRESENTATIONS

SCIENTIFIC MEETINGS

- Nielsen, K.J. and Zabin, C. Co-Chairs, Revealing San Francisco Bay's Natural and Constructed Rocky Shores: Ecological Insights to Inform Nature-Based Adaptation and Restoration. Poster Cluster Session, **14th Biennial State of the San Francisco Estuary Conference**, Oakland CA. October 21-22, 2019.
 - Nielsen, KJ and Zabin, C. 2019. Revealing San Francisco Bay's natural and constructed rocky shores: ecological insights to inform nature-based adaptation and restoration
 - Barceló Rosario, D[^]., E. Max⁺, C. Zabin & KJ Nielsen. 2019. Distributional limits of San Francisco Bay rockweed populations are influenced by substratum slope and tidal height^{*}
 - Riggins, B⁺., C. Wegener⁺, D. Barceló Rosario[^], C. Zabin & KJ Nielsen. 2019. Rockweed beds of San Francisco Bay are habitat for abundant invertebrate prey for fishes and birds.
 - C. Wegener⁺, B. Riggins⁺, and KJ. Nielsen. 2019. Reproductive phenology of the rockweed, *Fucus distichus*, in San Francisco Bay.
 - ^NSF REU summer intern, ⁺IMES MS student, *Student Poster Award, 2nd Place

- Nielsen, K.J. Dugan, J., Wood, M.E.*, Hubbard, D., Mulligan, T., Craig, S., Laucci, R., Schooler, N. Geographic variation in the structure of California's sandy beach ecosystems. **Western Society of Naturalists**, Monterey, CA. November 10-13, 2016.
- Saarman, E.T., Owens, B., Ambrose, R.F., Carr, M.H., Field, J.C., Murray, S.N., Nielsen, K.J., Weisberg, S.B. Research and education in protected areas: a novel ecologically-based permitting decision framework. **Western Society of Naturalists**, Monterey, CA. November 10-13, 2016.
- Hettinger, A.,* Chan, F., Hacker, S., Nielsen, K.J., Barner, A., Menge, B. Missing the full story: examining responses of coralline algae to environmental variability in the context of ocean acidification. Western Society of Naturalists, Monterey, CA. November 10-13, 2016.
- Succow, M.L., Barrett, D.R., Mulligan, H.L., Mulligan, T.J., Nielsen, K.J., Craig, S.F. Where the surf meets the sand: predation by redtail surfperch on pacific sand crabs within northern California sandy beaches. **Western Society of Naturalists**, Monterey, CA. November 10-13, 2016.
- Hartnett, R.J.,* Nielsen, K.J., Wilkerson, F., Elliott, M., Nur, N., & Jahncke, J. Developing marine food web models to evaluate blue whale, Cassin's auklet and salmon responses to long- and short-term changes in oceanography in the California Current. North Pacific Marine Science Organization Annual Meeting (PICES), San Diego, CA, November 1-13, 2016. BEST POSTER AWARD
- Hartnett, R. J.*, Nielsen, K.J., Wilkerson, F. P., Nur, N., Jahncke, J. Connecting the dots in the Gulf of the Farallones: linking physical ocean conditions and nutrients to the ecological success of planktivorous predators. **Ocean Sciences Meeting**, New Orleans, Louisiana, February 21-26, 2016.
- Nielsen, K.J., Mulligan, T., Dugan, J., Craig, S., Laucci, R. Connecting communities, building capacity and creating ecosystem resilience through MPA monitoring in northern California. **Western Society of Naturalists**, Sacramento CA. November 5-8, 2015
- Freiwald, J., Caselle, J., Meyer, R., Blanchette, C., Hovel, K., Neilson, D., Dugan, J., Altstatt, J., Nielsen, K.J., Bursek, J. Challenges and opportunities for citizen science monitoring of MPAs in California: case studies and recommendations. Western Society of Naturalists, Sacramento CA. November 5-8, 2015
- Succow, M.L.*, Barrett, D.R., Mulligan, H.L., Mulligan, T.J., Nielsen, K.J., Craig, S.F. Got crabs? Predation by redtail surfperch on pacific sand crabs on northern California sandy beaches. **Western Society of Naturalists**, Sacramento CA. November 5-8, 2015
- Maguire, A.K.*, Nielsen, K.J., Rogers-Bennett, L. The blood sucking ectoparasitic snail (*Evalea tenuisculpta*) and its red abalone host (*Haliotis rufescens*): A cryptic infestation of concern on wild and aquacultured abalone in California. **National Shellfisheries Association 107th Annual Meeting,** Monterey, California March 22-26, 2015
- Liebowitz, D.M., Nielsen, K.J., Dugan, J.E., Morgan, S.G., Malone, D.P., Largier, J.L., Hubbard, D.M., Carr, M.H. Ecosystem connectivity and trophic subsidies of beaches. **Western Society of Naturalists**, Tacoma, WA. November 13-16, 2014
- Maguire, A.K.*, Nielsen, K.J., Rogers-Bennett, L. The blood sucking Vampire snail, *Evalea tenuisculpta*, Infects red abalone, *Haliotis rufescens*, in northern California. **Western Society of Naturalists**, Tacoma, WA. November 13-16, 2014
- Gül, M.R.*, Nielsen, K.J. Invasion success of *Botrylloides violaceus* under contrasting conditions of temperature, food availability and species richness. **Western Society of Naturalists**, Tacoma, WA. November 13-16, 2014

Hartnett, R.H.*, Nielsen, K.J., Wilkerson, F.P., Jahncke, J. Connecting the dots in the Gulf of the Farallones: from physical ocean conditions to ocean productivity to the top of the food web. **Western Society of Naturalists**, Tacoma, WA. November 13-16, 2014

- Nielsen, K. J. 2013. Contrasting community structure, trophic links and ecosystem connectivity of long versus pocket beaches along California's north-central coast.
 - **Coastal and Estuarine Research Federation**, San Diego, CA. November 3-7, 2013.
 - Western Society of Naturalists, Oxnard, CA, November 7-10, 2013.
- Barner, A. K.*, S. D. Hacker, B. A. Menge, K. J. Nielsen & F. Chan. Context-dependent spatial variation of interaction between kelp canopy and understory in a coastal upwelling system. Ecological Society of America Annual Meeting, Minneapolis, MN, August 2013.
- O'Kelly, C. J., G.J. Mottet, A. Paquin & K.J. Nielsen. The *Gonyaulax* shell game: Deducing the identity of a putative emergent HAB along the central California coast. **Harmful Algal Blooms in the California Current Symposium**, **CALCOFI Conference**, Asilomar Conference Center, Pacific Grove, CA, 4-6 December 2012.
- Nielsen, K. J., T. C. Goughier, B. A. Menge, F. T. Chan, E. E. McPhee-Shaw, J. L. Largier & P. T. Raimondi. Synoptic forcing and local scale dynamics of surfzone phytoplankton in the northern California Current Ecosystem over 9 years and 8 degrees of latitude.
 Eastern Pacific Ocean Conference, Mt. Hood, OR, 19-22 September 2012.
- Close, S. L.*, F. T. Chan, K. J. Nielsen, S. D. Hacker, B. A. Menge. Nutrient content of rocky intertidal macrophytes and its relation to environmental variability across a large biogeographic region. **Ecological Society of America** Annual Meeting, Portland, OR, August 2012.
- Stokes, J. A*. & K. J. Nielsen. Don't bully the bullate: A new wrinkle on how two forms of an intertidal kelp enable it to cope with environmental stress. California State
 University (CSU) Council on Ocean Affairs Science and Technology (COAST)
 Faculty-Student Poster Reception. CSU Board of Trustees Meeting, Long Beach, CA, January 2012.
- Close, S. L.*, F. T. Chan, K. J. Nielsen, S. D. Hacker, B. A. Menge. Linking nutrient content of intertidal macrophytes to ambient nutrient availability across a large biogeographic region. Western Society of Naturalists Annual Meeting, Vancouver, WA, November 2011.
- Malm, P. D.*, Nielsen, K. J. The role of grain size and wrack composition in structuring talitrid amphipod populations on northern California beaches. **Western Society of Naturalists Annual Meeting**, Vancouver, WA, November 2011.
- Nielsen, K. J., S. G. Morgan, J.E. Dugan. Sand crab population monitoring in MPAs: a methodological comparison to inform development of ecosystem indicators. **Western Society of Naturalists Annual Meeting**, Vancouver, WA, November 2011.
- Paquin, A. L*, K. J. Nielsen & J. L. Largier. An abundance of nearshore phytoplankton: unraveling what drives the 'green ribbon' along an upwelling coast. **Western Society of Naturalists** Annual Meeting, Vancouver, WA, November 2011.
- Stokes, J. A.*, K. J. Nielsen. Blade morphology variation ameliorates emersion stress and photosynthetic performance of the intertidal kelp *Saccharina sessilis*. **Western Society of Naturalists** Annual Meeting, Vancouver, WA, November 2011.
- Tait, L. W. B. A. Menge, S. D. Hacker, F.T. Chan & K. J. Nielsen. Impacts of climate change on the primary productivity of macroalgae: effects of pH and temperature on net productivity. Western Society of Naturalists Annual Meeting, Vancouver, WA, November 2011.

- Nielsen, K. J., S. D. Morgan & J. E. Dugan. Baseline characterization and monitoring of sandy beaches in California's north central coast MPAs. **Beyond the Golden Gate Research Symposium**. San Francisco, CA November 2011.
- Schneider, L.*, T. Nguyen*, & K. J. Nielsen. Coralline algal turf communities in northern California: Community structure and potential as a bioindicator of local seawater carbonate saturation state. **Beyond the Golden Gate Research Symposium**. San Francisco, CA November 2011.
- Stokes, J. A.*, K. J. Nielsen. Variation in blade morphology ameliorates emersion stress and photosynthetic performance of the intertidal kelp *Saccharina sessilis*. **Beyond the Golden Gate Research Symposium**. San Francisco, CA November 2011.
- Malm, P. D.* & K. J. Nielsen. Do macrophyte wrack species composition and input rates influence the distribution and abundance of talitrid amphipod (*Megalorchestia* spp.) populations on northern California beaches? **Beyond the Golden Gate Research Symposium.** San Francisco, CA November 2011.
- Paquin, A. L.*, K. J. Nielsen & J. L. Largier. An abundance of nearshore phytoplankton: what drives formation and oscillations of the 'green ribbon' over short time scales? Beyond the Golden Gate Research Symposium. San Francisco, CA November 2011.
- Paquin, A., M. Tift, D. Crocker, K. Nielsen & E. McPhee-Shaw. Phytoplankton to predators: marine ecology, physiology and oceanography at Sonoma State University (SSU).
 California State University (CSU) – Council on Ocean Affairs Science and Technology (COAST) Faculty-Student Poster Reception. CSU Board of Trustees Meeting, Long Beach, CA, January 2011.
- McPhee-Shaw, E.E., K. J. Nielsen & J. Largier. Near-coast chlorophyll *a* events and wavedriven transport. **57th annual Eastern Pacific Ocean Conference**, Mount Hood, OR, September 22-26 2010.
- Nielsen, K. J., S. A. Thompson, C. A. Blanchette & H. Knoll. Save the seaweeds: Applying ecological insights to avoid "boom and bust" commercial exploitation of wild populations. **Internation Temperate Reef Symposium**, Adelaide, Australia, January 2009.
- Thompson, S.A., K. J. Nielsen, C.A. Blanchette, B. Brockbank & H. Knoll. Effects of commercial collection on growth and reproductive output of *Postelsia palmaeformis*. Ecological Society of America, San Jose, CA August 2007.
- Lubchenco, J., F. Chan, J. Barth, B. Menge, J. Bane, D.Fox, A. Kirincich, M. McManus, K.J Nielsen, C. Peterson, J. Pierce, L. Washburn, and H. Weeks. Arrhythmias in the coastal ocean off the west coast of the US. **Ecological Society of America**, San Jose, CA August 2007.
- Nielsen, K. J., S.A. Thompson & C.A. Blanchette. Deficits in biological knowledge and literacy impede management and protection of the Sea Palm, *Postelsia palmaeformis*. International Temperate Reef Symposium, Santa Barbara, CA 2006.
- Thompson, S. A. & K. J. Nielsen. Assessing the impact of commercial collecting on *Postelsia* palmaeformis. Western Society of Naturalists 86th Annual Meeting, Monterey Bay, CA, November 2005.
- Nielsen, K. J., P. Halpin, T. Freidenberg, B.A. Menge and J. Lubchenco. 2004. A biogeographic meta-analysis of herbivore effects on intertidal macroalgae. **Western Society of Naturalists 85th Annual Meeting**, Rohnert Park, CA, November 2004.
- Kavanaugh, M.T., K. J. Nielsen and B.A. Menge. Phytoplankton shading of marine benthic macrophytes: implications for community structure. Western Society of Naturalists 85th Annual Meeting, Rohnert Park, CA, November 2004.

- Nielsen, K. J., C.A. Blanchette, B.A. Menge, B. Grantham & J. Lubchenco. Capturing the light fantastic: oceanographic and tidal influences on intertidal algae. **Phycological Society of America**, Gleneden, OR 2003.
- Bracken, M. E. & K. J. Nielsen. Nitrogen loading by invertebrates increases growth and diversity of intertidal seaweeds. **Phycological Society of America**, Gleneden, OR 2003.
- Chan, F., B. A. Menge, K. J. Nielsen, and J. Lubchenco. Nutrient use efficiency and coastal productivity: comparative perspectives on ecosystem structure and mechanisms of control. **Phycological Society of America**, Gleneden, OR 2003.
- Menge, B. A., G. Allison, T. Freidenburg, M. Kavanaugh, J. Lubchenco, K. J. Nielsen, C. Schoch, and S. Wood. Local to coastal-scale macrophyte community structure: surprising patterns and possible mechanisms. Phycological Society of America, Gleneden, OR 2003.
- Nielsen, K. J., B.A. Menge, B. Grantham & J. Lubchenco. Macrophytes, phytoplankton, and upwelling: light limitation in the intertidal zone? **International Temperate Reef Symposium**, Christchurch, New Zealand January 2003.
- Nielsen, K. J., C.A. Blanchette, B.A. Menge & J. Lubchenco. Fluorescing sea palm fronds: do snapshots of physiological state reflect ecological performance? **Western Society of Naturalists**, Monterey, CA November 2002.
- Nielsen, K. J., F. Chan, B.A. Grantham, D. Fox, M. Amend, R. Davis-Born, J. Lubchenco & B. A. Menge. Unusual Die-Off off Oregon's Coast Associated with a Persistent Low-Oxygen Zone.
 - **Ecological Society of America**, Tucson, AZ August 2002.
 - International Temperate Reef Symposium, Christchurch, New Zealand January 2003.
- Nielsen, K. J., B.A. Menge, B. A. Grantham, & J. Lubchenco. Light attenuation, upwelling, and community structure on rocky shores: can persistent phytoplankton blooms limit macrophytes? **Ecological Society of America**, Tucson, AZ August 2002.
- Nielsen, K. J., B.A. Menge, & J. Lubchenco. Fluorescing fronds: Snapshots of the physiological state of intertidal macrophytes. **Society for Integrative and Comparative Biology**, Anaheim, CA. 2002.
- Nielsen, K. J., B.A. Grantham, B.A. Menge & J. Lubchenco. Rocky Intertidal Oceanography: Local Scale Modification of a Large Scale Template. **Western Society of Naturalists**, Venture, CA 2001.
- Nielsen, K. J. & S.A. Navarrete 2000. Do bottom-up factors drive variation in algal assemblages on rocky shores? Upwelling and herbivory along the central Chilean coast. **Ecological Society of America**, Snowbird, UT, August 2000.
- Nielsen, K. J. 1997. Nutrients and grazing in tidepools: bottom-up and top-down forces generate structure in a marine community.
 - International Temperate Reef Symposium, Santiago, Chile, July 1997.
 - Western Society of Naturalists, La Paz, Mexico, January 1997.
 - Ecological Society of America, Providence, RI, August 1996.
- Van Alstyne, K.L. & K. J. Nielsen, 1996. The use of randomization methods to analyze data from multiple-choice feeding-preference experiments. **Ecological Society of America**, Providence, RI, August 1996.
- Nielsen, K. J. 1996. Nutrients and grazing in tidepools: an experimental evaluation of bottom-up and top-down forces in a marine community. **Biology Graduate Student Symposium**, Hatfield Marine Science Center, South Beach, OR, March 1996.

- Nielsen, K. J. 1993. The role of adult conspecifics and recruitment variability on the horizontal distribution of ribbed mussels in Jamaica Bay, NY. **Western Society of Naturalists**, Otter Crest, Newport, OR January 1993.
- Nielsen, K. J. 1992. Ribbed mussel (*Geukensia demissa*) recruitment in Jamaica Bay, NY. New England Estuarine Research Society, May 1992.
- Franz, D.R., P. Ficara, K. J. Nielsen, & J.T. Tanacredi 1991. Can ribbed mussels be used to monitor environmental quality in Jamaica Bay (Gateway National Recreation Area)?
 Preliminary results. 2nd National Park Service Conference on Science and Natural Resource Management in the North Atlantic Region, November 1991.

COMMUNITY SERVICE

- March 2021 -present, science advisor. Above Below: A story of the Disappearing Kelp forests of northern California. An Art + Science Catalogue. A community project.
- February 2020. Estuary & Ocean Science Center research and tour of SF State's Romberg Tiburon Campus. **Marin County Civil Grand Jury**. SF State- Romberg Tiburon Campus, Tiburon, CA. February 3, 2020.
- Summer 2011, Faculty Mentor (to Katie Azcárraga, Maria Carrillo High School), **Summer High School STEM Internship Program (SHIP)**; a partnership between the School of Science and Technology (SST) at Sonoma State University and the Sonoma County Office of Education (SCOE).
- Spring 2009, 2011, Fall 2008, 2007, Squid Anatomy & Biology (one-day classroom science activity with SSU Department of Biology MS students), **Austin Creek Elementary School**, Santa Rosa, CA
- August 2008, March 2006, Tidepool Life Activity, **The Living Room: A Daytime Shelter for Homeless Women & Children**, Santa Rosa, CA
- July 2007, Tidepool Life Activity, **Excel: A Unique Enrichment Program for Grades 4-9**, Sonoma State University, Rohnert Park, CA
- Spring 2007, Supervision, training & placement of 14 Sonoma State University students into 7 **Sonoma County Public Elementary Schools** to teach Ocean Science Lessons.
- Spring 2006, Supervision, training & placement of 12 Sonoma State University students into 6 **Sonoma County Public Elementary Schools** to teach Ocean Science Lessons.
- December 2002, volunteer presentation and lab activity, "Intertidal Zone Ecology and Field Experiments," for Marine Science class, **Corvallis High School**, Corvallis, OR
- October 2002, invited speaker, **Oregon Sea Grant, Scientist and Fishermen Exchange** (**SAFE**). Review of onshore, subtitdal and nearshore research in progress by PISCO. Englund's Marine Supply, Newport, OR.
- November 2000, presenter, **The 24th Annual Science and Engineering Workshop for Middle School Girls**, organized by the **Association for Women in Science**. Lab tour and hands-on demonstration of methods used to sample phytoplankton abundance in the nearshore environment
- 1995- 2002, Job Shadow and Mentor, **School-to-Career Program**, **Corvallis School District 509J**, Corvallis, OR

REVIEWER

Biogeosciences, Biological Bulletin, California Sea Grant, Deep Sea Research, Ecology, Ecological Monographs, Ecology Letters, Estuarine, Coastal & Shelf Science, Inter-American Institute for Global Change Research, Journal of Phycology, Journal of Experimental Marine Biology and Ecology, Limnology and Oceanography, Limnology and Oceanography Methods, Marine Ecology Progress Series, National Estuarine Research Reserve, National Oceanographic and Atmospheric Administration, National Science Foundation, People and Nature, Revista Chilena de Historia Natural, University of California Press

PROFESSIONAL SOCIETIES

Coastal and Estuarine Research Federation, Ecological Society of America, Western Society of Naturalists, Phycological Society of America, American Institute of Biological Science, American Geophysical Union, Sigma Xi

PROFESSIONAL DEVELOPMENT & ADVANCED COURSES

- **Openscapes Champions Program (CSU COAST Cohort).** An open data science mentorship program for science teams. Nielsen Lab group team. May 7 – June 18, 2021. <u>https://www.openscapes.org/champions/</u>
- **Climate Action Pursuit: Toward Justice and Resilience.** Second Nature and Intentional Endowments Network. Climate Action Pursuit. Conference/workshops for learning, planning, acting, and leading on equity and climate in our campuses and communities. February – December 2021.

https://secondnature.org/climateactionpursuit-2/

- Science Coding Immersion Program, San Francisco State University. 1 June 9 July 2021. <u>https://pleunipennings.wordpress.com/science-coding-immersion-program</u>
- **Building Gender Equity in the Academy: Institutional Strategies for Change,** AAAS Sea Change. February May 2021. <u>https://seachangeinstitute.aaas.org</u>
- **Undoing Racism in the GeoSciences,** a community-wide journal-reading and policydesign curriculum to help Geoscientists unlearn racism and improve accessibility, justice, equity, diversity, and inclusion. NSF and Woods Hole Oceanographic Institute. January – May 2021. <u>https://urgeoscience.org</u>
- Academics for Black Survival and Wellness. Training for non-black participants to make actionable change to address anti-black racism in their personal lives and academia. June 2020. <u>https://www.academics4blacklives.com/</u>
- Communicating Ocean Science, California Center for Ocean Sciences Education Excellence (COSEE), The Lawrence Hall of Science, University of California – Berkeley; June 6-8, 2005.

http://www.coseeca.net/programs/communicatingoceansciences/

- **Biomechanics and Ecological Physiology of Intertidal Communities**, Mark Denny and George Somero, instructors, Hopkins Marine Station, Stanford University, Summer 1999
- **Invertebrate Zoology,** Stan Rachootin and Patricia Morse, instructors, Friday Harbor Laboratories, University of Washington, Summer 1993
- Marine Phycology, Tom Mumford and Sandra Lindstrom, instructors, Friday Harbor Laboratories, University of Washington, Summer 1993

LANGUAGES

English - *fluent*

Spanish- proficient in reading, listening, and writing; conversational in speaking



Department of State Lands

775 Summer Street NE, Suite 100 Salem, OR 97301-1279 (503) 986-5200 FAX (503) 378-4844 www.oregon.gov/dsl

State Land Board

Kate Brown Governor

Shemia Fagan Secretary of State

Tobias Read State Treasurer

State Land Board

Regular Meeting August 9, 2022 Agenda Item 5

<u>SUBJECT</u>

Request for authorization to exchange quitclaim deeds to clear title of formerly submerged and submersible land with adjacent landowners, as applicable, for former Willamette River channel in Benton County.

ISSUE

Whether the State Land Board should authorize the exchange of quitclaim deeds with William D. Pitcher (Estate) and adjacent landowners to clear title of former Willamette River channel land and to establish state boundary ownership of the beds and banks of the river (Appendix A).

<u>AUTHORITY</u>

- Oregon Constitution, Article VIII, Sections 2 and 5; pertaining to the Common School Fund and land management responsibilities of the State Land Board.
- ORS 273.055; relating to the power to acquire and dispose of real property.
- ORS 273.171; relating to the duties and authority of the Director.
- ORS 273.780; relating to the retention of mineral rights.
- ORS 274.025; relating to ownership of submerged and submersible lands of navigable streams and lakes.
- ORS 274.402; relating to jurisdiction to assert title to submerged or submersible lands in navigable waterways.
- OAR 141-067; relating to the sale, exchange, and purchase of state land.
- OAR 141-067-0155(11) relating to clearing title to lands that were formerly submerged and submersible lands.
- OAR 141-067-0195 relating to resolving ownership of formerly submerged and submersible lands.
- OAR 141-067-0300 relating to resolving claims to formerly submerged or submersible lands.

• Real Estate Asset Management Plan (REAMP), adopted by the Land Board; February 2012.

SUMMARY

Upon statehood, Oregon was granted the bed and banks of all navigable rivers to protect the public uses of navigation, commerce, fisheries, and recreation on the state's rivers. When a river channel moves gradually over time through natural accretion, the state's ownership generally moves with the waterway but leaves behind formerly submerged and submersible land with unclear title.

The proposed quitclaim deed exchange would clarify ownership for the state and private landowners on the Willamette River in Benton County at Township 14 South, Range 5 West, Sections 23, 24, 25 & 26. The executor of the William D. Pitcher Estate approached the Department in November 2020 requesting consideration to exchange formerly submerged and submersible land for what is today segments of the Willamette River. A review of the historical records, including historical maps and more modern aerial photos, shows the course of the Willamette River at this location shifted over time through natural accretion. Based on historical information, the state retains ownership of the bed and banks of the main channel of the Willamette River and a back channel, Ingram Slough. The state does not have a claim of ownership to the former channels of the Willamette River that are now dry upland. It is recommended the exchange be to the ordinary high-water line of the Willamette River and the Ingram Slough.

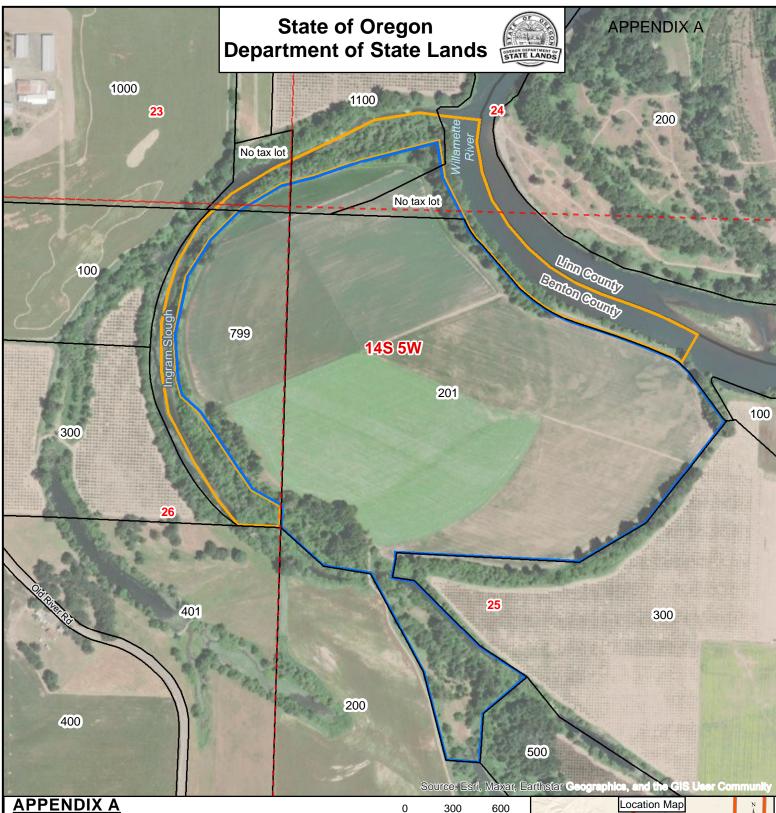
RECOMMENDATION

The Department recommends the State Land Board authorize an exchange of quitclaim deeds with William D. Pitcher (Estate) to establish the state's ownership of land below the ordinary high-water line in the main channel of the Willamette River and in the Ingram Slough, and to remove the cloud of title for the William D. Pitcher (Estate) as to the formerly submerged and submersible lands from the former channel.

APPENDICES

A. Map of Property

Agenda Item 5 August 9, 2022 Page 2 of 2



63163-LE Land Exchange between DSL and Pitcher T14S, R5W, Sec. 23, 24, 25 and 26 Tax lots 201, 799 and a portion of tax lot 1100 **Benton County**



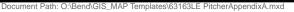
DSL to Pitcher (143 acres)

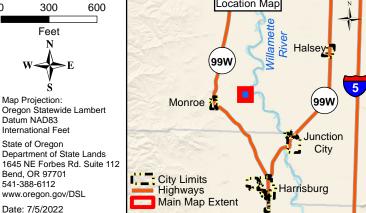
Pitcher to DSL (25 acres; approximate)



Sections

This map depicts the approximate location and extent of a Department of State Lands Proprietary authorization for use. This product is for informational purposes only and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and sources to ascertain the usability of the information







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State Land Board

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Shemia Fagan Secretary of State

Tobias Read State Treasurer

State Land Board

Regular Meeting August 9, 2022 Agenda Item 6

SUBJECT

Request to decertify 4,907 acres of Common School Forest Lands within the Klamath District.

<u>ISSUE</u>

Whether the State Land Board should approve the decertification of 4,907 acres of forestlands within the Klamath District for the purposes of cost savings to the Common School Fund.

<u>AUTHORITY</u>

- Oregon Constitution, Article VIII, Sections 2 and 5; pertaining to the Common School Fund and land management responsibilities of the State Land Board.
- ORS 273.141; relating to the nature of services provided by other agencies
- ORS 273.171; relating to the duties and authority of the Director
- ORS 273.523; relating to the sale of forest products
- ORS 530.460; relating to the designation of Common School Forest Lands
- ORS 530.470; relating to the determination of the designation of Common School Forest Lands
- ORS 530.480; relating to the filing of resolutions made by the boards
- Real Estate Asset Management Plan (REAMP) adopted by the Land Board; February 2012.

SUMMARY

For several decades, the Oregon Department of Forestry has managed and sustainably harvested Department of State Lands certified forestlands on behalf of DSL. Approximately 33,005 acres of DSL lands are currently classified as certified forestlands, meaning they are primarily suited for growing timber and other forest

products. Timber harvests and other sales of forest products generate revenue for the Common School Fund.

Annual revenue generated by certified forestlands is dependent upon the costs of management and quantity and value of harvested forest products. Certified forestlands cost approximately \$40 per acre annually to manage. The financial performance of certified forestlands is impacted by parcels that are not capable of producing reliable long-term timber revenue, but still contribute to annual management costs.

Decertification of certified forestland parcels is one option DSL considers when costs of management exceed long-term revenues. If forestlands are decertified, DSL takes over land management, reducing overall costs of the forests, as overhead associated with ODF's management of certified forestlands is no longer necessary.

Klamath District Forestlands

Approximately 21 precent of DSL's certified forestlands are in ODF's Klamath district. There are two large blocks of certified forestland in the Klamath district, known as Sun Pass (3,663 acres) and Yainax Butte (3,164 acres) (See maps in Appendices A through D). Although the Klamath district has produced an average of 903 thousand board feet (MBF) of timber volume annually between 2010 and 2020, it has the lowest return per MBF compared to other districts.

ODF has been managing these forestlands effectively; however, over the last 5 years (FY 2017 – FY 2021) the Klamath District has produced less than \$60,000 in annual revenue, while costing nearly \$200,000 annually to manage. These costs include direct¹ (variable) expenses for on-the-ground management and indirect² (fixed) expenses such as service and supply, personnel services, and administrative prorate, as identified by ODF. The budgeted 2022 fiscal year costs for management of DSL's certified forestland in the Klamath District is \$228,891, or \$33.52 per acre.

Revenues for these forestlands have been low due to poor timber markets, low-value species mix, and low volume per acre harvests. In addition to low productivity, these forestlands also have few near-term harvest opportunities.

It is projected that decertifying these 6,827 acres of forestlands would save the Common School Fund up to \$200,000 in costs annually, while having little effect on revenue.

¹ Direct expenses are variable costs including Personnel Services and Service and Supply for on-theground management work.

² Indirect expenses are fixed costs including Personnel Services, Service and Supply for District management and office/administrative staff, Salem staff and Administration Prorate.

Future Management of Klamath District Forestlands

If decertified, DSL would take over management of these parcels. Since hiring a forester in 2019, DSL has established internal capacity to manage the Klamath forestlands. These lands would fit into a larger portfolio of noncertified forestlands east of the Cascade Range managed by the Department. Much of the future maintenance needs will be for forest health improvement and fuels reduction thinning. These management needs are expected to occur once a decade and costs associated with these treatments will be minimal.

The single fixed expense that would remain for the Department upon transfer of management of the Klamath forestland parcels is annual fire protection for wildfire response provided by the Klamath-Lake ODF Fire Protection District, as required by law. The current rate for ODF fire protection in this district is \$3.86 per acre totaling \$25,155 annually. This rate is subject to change based on ODF fire protection district costs. If fires occur on DSL lands, under the agreement with ODF there will be no further costs billed to the Department after these annual fees have been paid.

The long-term management goal for the parcels would be to reduce fuels and improve forest health. Additionally, the Department would seek to continue to generate income from authorizations, including grazing leases managed jointly by DSL Forestry and Rangelands programs. Currently, the Yainax Butte Tract is under a grazing lease and earning approximately \$3,000 annually.

Revenue generated from most future forestry projects would cover harvesting and DSL personnel costs. Anticipated management costs would be absorbed into the forester's personnel costs, with harvest income projected to cover all non-fixed expenditures. Long-term capital investment needs for the Klamath forestlands are projected to be minimal.

Decertification

The proposed transfer of management of the Klamath parcels would take place in two separate decertification processes. The first decertification, which would be effective July 1, 2023, would total 4,907 acres (Appendix E), would include all of Yainax Butte and some sections of the Sun Pass tract. A portion of the Sun Pass tract is scheduled for an upcoming harvest in 2022 and 2023. The remaining 1,920 acres of the Sun Pass tract would be decertified at a later date, leaving them under ODF management until the upcoming timber sales are completed (Appendix B). DSL staff will work with ODF to ensure legal access is acquired for decertified properties.

The process for decertification of Common School Forest Lands requires approval of the State Land Board and Oregon Board of Forestry. This recommendation for the first decertification process is being submitted to the State Land Board prior to being submitted to the Board of Forestry.

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RECOMMENDATION

The Department recommends that the State Land Board approve the decertification of 4,907 acres of Common School Forest Lands within the Oregon Department of Forestry's Klamath District, as described in Appendix E, to be effective July 1, 2023. This decertification will include 3,164 acres of the Yainax Butte tract, and 1,743 acres of the Sun Pass tract.

APPENDICES

Appendix A – Map of Klamath District parcels

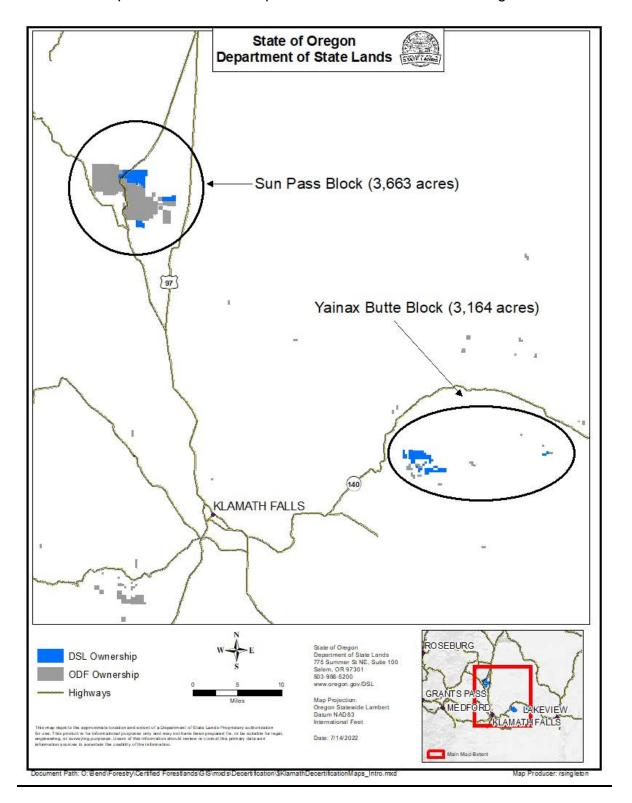
Appendix B – Map of Sun Pass parcels

Appendix C – Map of Yainax Butte main parcels for decertification

Appendix D – Map of Yainax Butte east parcels for decertification

Appendix E – Table of parcels for first decertification

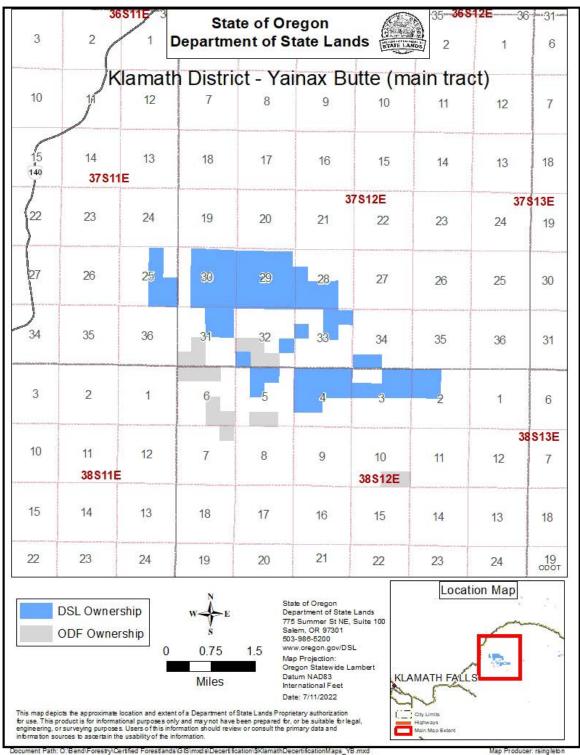
APPENDIX A Map of Klamath District parcels for decertification showing in blue.



APPENDIX B Map of Sun Pass parcels depicting decertification 1 and 2.

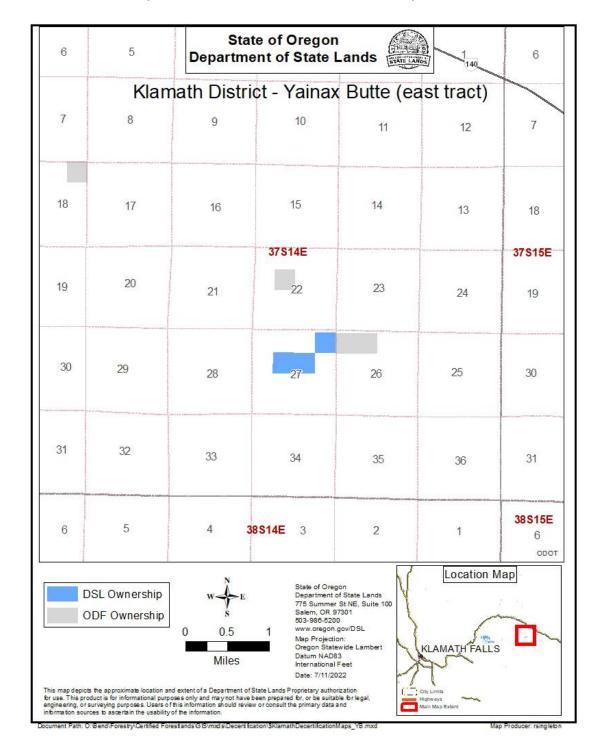
35	5 36 31 31 \$7.5E 32		State of Oregon						33 31	33 31S7E 34 35 36		
2	1	6	5	Department of State Lands						4	3	2 1
11	12	7	8	K la	math	Distr 11	ict - 12	Sun 7	Pass	9	10	11
14	13 2 S6E	18	17	16 32 S7	15 5E	14	13	18	17	16	15	12
23	24	19	20	21	-22	23	24	19	20	3287E 21	22	13 23 24
26	25	30	29	28	27	26	25	30	29	28	27	26 ₂₅
35	36	31	32	33	34	35	36	31	32	33	34	35 36
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23	24	19	20	3387 21	.5E	23	24	19	20	33S7E 21	22	23 24
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35	36	31	32	33	34	35	36	31	32	33	34	36 35
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APPENDIX C Map of Yainax Butte main tract decertification parcels.



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APPENDIX D Map of Yainax Butte east decertification parcels.



APPENDIX E

DSL Parcel	Tax	arce	Acres*	Tract			
267	0210	33	Rang 07.5E	Sectio 24	Legal Description N2	320	Sun
268	0210	33	07.5E	13	LOTS 5, 6, 7	143.66	Sun
1194	0050	32	07.5E	24	ALL	640	Sun
1195	0090	32	07E	19	LOTS 7, 8, 13	100.22	Sun
2215	0040	32	07E	34	FR S2SW4	60	Sun
2220	0110	33	07E	4	N2	319.2	Sun
2221	0110	33	07E	3	NW4	160	Sun
1641	0090	37	11E	25	SE4	160	Yainax
1642	0170	37	12E	30	NE4SW4, W2SE4, SE4SE4	123.87	Yainax
1642	0170	37	12E	30	NE4SW4, W2SE4, SE4SE4	36.13	Yainax
1644	0170	37	12E	30	NE4SE4	40	Yainax
1646	0170	37	12E	29	W2SW4, NE4SW4	120	Yainax
1647	0170	37	12E	29	NW4SE4	40	Yainax
1870	0170	37	12E	30	SW4SW4	40	Yainax
1871	0170	37	12E	29	SE4SW4	40	Yainax
1877	0170	37	12E	29	S2SE4, NE4SE4	79.05	Yainax
1877	0170	37	12E	29	S2SE4, NE4SE4	40.95	Yainax
2133	0410	37	14E	27	NE4NE4	40	Yainax
2134	0170	37	12E	30	SE4NW4	40	Yainax
2135	0170	37	12E	28	SW4NW4	40	Yainax
2136	0410	37	14E	27	SW4NE4, SE4NW4	80	Yainax
2137	0170	37	12E	28	SW4, NW4SE4	117.3	Yainax
2137	0170	37	12E	28	SW4, NW4SE4	82.7	Yainax
2396	0250	37	12E	33	SW4NW4	40	Yainax
2397	0250	37	12E	32	NE4SE4	40	Yainax
2400	0240	37	12E	32	LOT 4	39.23	Yainax
2576	0170	37	12E	31	NE4	160	Yainax
2578	0170	37	12E	33	N2NE4, SW4NE4	120	Yainax
2612	0260	37	12E	34	LOTS 3, 4	77.08	Yainax
2618	0020	38	12E	5	LOTS 2, 3, SE4NW4	123.44	Yainax
2710	0090	37	11E	25	W2NE4	80	Yainax
2711	0170	37	12E	30	NE4NW4, W2NE4, SE4NE4	42.71	Yainax
2711	0170	37	12E	30	NE4NW4, W2NE4, SE4NE4	117.29	Yainax
2712	0170	37	12E	30	NE4NE4	40	Yainax
2713	0170	37	12E	29	N2	82.29	Yainax
2713	0170	37	12E	29	N2	237.71	Yainax
2718	0170	37	12E	28	SW4SE4	40	Yainax
2725	0030	38	12E	4	LOTS 1, 2, 3, 4, S2N2, N2SW4	404.21	Yainax
2732	0030	38	12E	3	LOTS 1, 2	80.32	Yainax
2733	0030	38	12E	2	LOTS 3, 4, S2NW4	159.6	Yainax
2735	0030	38	12E	3	S2NW4	80	Yainax
2736	0030	38	12E	3	S2NE4	80	Yainax
TOTAL						4906.96	

Parcels for first decertification, effective July 1, 2023.

*Acres are compiled from Oregon Department of Forestry's 2017 Managed Common School Forestlands report.