SALI 201: Introduction to the Salish Sea

Western Washington University Spring 2022 Tuesdays & Thursdays 10-11:50am

Instructors

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Map: Aquila Flower 2021 -Salish Sea Reference Map

This version of the SALI 201: Introduction to the Salish Sea course syllabus was taught in Spring 2022 face-to-face at Western Washington University. This syllabus includes notes and links for instructional use.

For more information, please contact the instructional team:

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Course Description

About Intro to the Salish Sea Course: This place-based, experiential, and multidisciplinary course introduces students to the complex human-environment systems of our shared bioregion, an international inland sea fed by watersheds governed by the United States, Canada, and over 60 Tribes and First Nations. This course invites students to critically examine complex issues in the Salish Sea, and to build meaningful connections across borders, disciplines, and systems to help bring to life an environmentally healthy and just future for the Salish Sea.

About the Salish Sea Minor: This course is the core course in the Salish Sea Studies Minor. The Minor gives students an opportunity to develop a sense of place and a sense of responsibility for learning and caring for where they live. Composed of a core set of interdisciplinary courses and a set of electives spanning all colleges on campus, this Minor is designed to demonstrate that many ways of knowing are relevant and important for understanding the Salish Sea. Learn More / Declare a Minor

About the Salish Sea: The Salish Sea bioregion is an estuarine inland sea surrounded by snow-capped mountain ranges and rich in biodiversity. Freshwater lakes and glaciers filter through temperate rainforest into rivers that meet the saltwater and tides from the Pacific Ocean, filling the Puget Sound, Georgia Basin, and Strait of Juan de Fuca. The name "Salish Sea" reflects the long history of Straits and Coast Salish peoples, who have deep and abiding relationships with the lands and waters of this region since time immemorial. Over the past two centuries, the Canada-US border and each nation's governance structures have cut across this waterscape and intersected with Indigenous nations' laws and governance systems in myriad ways. Millions of people from around the world have moved to the region's cities and rural areas. This industrial-scale population growth, combined with extractive resource economies and global climate change, create myriad challenges for the health of this region and all who live here.

Course Learning Outcomes

By the end of this course, you will gain practice in:

- Weaving together Indigenous knowledge systems, natural sciences, social sciences, and the humanities to shape your inquiries about the Salish Sea
- Sharing stories and science about the Salish Sea through art, maps, stories, letters, videos, podcasts, and other forms of expression
- Analyzing systems of power and governance between sovereign Indigenous nations, BC/Canada, and WA/US in the multinational Salish Sea
- Identifying critical issues and evaluating potential solutions for shaping the current and future health of the Salish Sea
- Developing relational accountability with the Salish Sea and a commitment to placeconscious learning that can be practiced wherever you live or travel

Course Development

Development of the Salish Sea Studies curriculum has been generously supported by anonymous donations to the Salish Sea Institute, the Keta Legacy Foundation, the National Endowment for the Humanities, and the Pacific Northwest National Resource Center on Canada at the University of Washington and Western Washington University (US Department of Education Title VI grant). There is a parallel course offered at Whatcom Community College. The course syllabus and course material has been developed in collaboration and conversation with many people, including Marco Hatch, Nick Stanger, Robin Kodner, Anna Booker, Anita Harker, Kaatje Kraft, Ian Stacy, Jennifer Zovar, Anna Cook, Kamala Todd, and James Miller.

Policies & Support

We are all responsible for abiding by current <u>COVID safety practices</u> and <u>university policies</u>. You are responsible for all student policies here: <u>https://syllabi.wwu.edu/</u>.

We will be following all university guidelines for COVID-19 safety and protocols. All students must wear masks at all times in class. Any changes in modality or class expectations due to the evolving COVID-19 situation will be announced on Canvas and in class.

Syllabus Changes: This syllabus is subject to change. Changes, if any, will be announced in the Announcements tab on Canvas. Students will be responsible for all changes.

Late Policy: You have a 3-day no-questions-asked grace period on all assignment deadlines. After that, late assignments will be penalized -10% per day late.

Academic Hardship & Support: If challenging circumstances arise, please don't hesitate to reach out to the <u>Counseling Center</u> and/or the <u>Registrar's Office</u>.

Contacts for Concerns & Questions:

- Covid-19 Questions: <u>https://www.wwu.edu/coronavirus/students</u>
- Medical: Health Center 650-3400 or <u>wwu.edu/chw/student_health</u>
- Emotional or psychological: Counseling Center 650-3400 or www.edu/chw
- Health and safety: University Police 650-3555 or www.ps.wwu.edu/
- Family or personal crisis or emergency: Dean of Students 650-3775 or <u>wwu.edu/dos/contact_us.shtml</u>

Assignments

Place Portfolio

Instructors will assign you a place in the Salish Sea for this assignment. You will research this place for the remainder of the quarter.

Portfolio 1: Where Are You and Who Are You?	150 pts	Due April 15
Portfolio 2: Mapping Your Place	150 pts	Due May 6
Portfolio 3: Writing Your Place	150 pts	Due May 27
Portfolio 4: Final Portfolio	150 pts	Due June 9

Participation & Reflection

Students are required to make weekly entries into <u>their reflection packet</u>. Instructors will collect packets to review on week 5 and week 10.

Participation (5pts per class x 20 = 100)	100 pts	Daily
Reflection Journal (5pts per prompt x 2 per week x 10 = 100)	100 pts	Weekly
Final Show & Tell	50 pts	Weeks 9 & 10
Final Narrative Reflection	150 pts	June 9

Readings

There is not a required text or reader for this course. Readings consist of scholarly articles, book chapters, and online resources, including media coverage of relevant topics. Readings will be made available through Canvas and/or Western Libraries' online database systems, and easily accessible. We aim for at least 50% of texts by Canadian authors and/or Indigenous authors. You will also be assigned videos, podcasts, and other media.

Grades

Grades will be letter grade mode. You may have the option to request Pass/No Pass (EP/NP) through the Registrar's Office. There is a deadline for this request. In-class and homework assignments will be reviewed and be marked complete/incomplete. Final grades are based on your performance on and completion of **all** course material.

Grade Scale A \geq 93% A \geq 90%B+ \geq 88%B \geq 83% B- \geq 80%C+ \geq 78%C \geq 73% C- \geq 70%D+ \geq 68%D \geq 63% D- \geq 60%

Extra Credit

You can engage in self-directed experiential learning activities to receive up to 50 additional points in this class. You can receive 10 points for completing and documenting an activity from this <u>Gameboard</u>. You can complete up to 5 activities (5 x 10points each = 50 points). All activities must be completed, documented, and added to Canvas by Dec 2. Extra credit will be graded at the end of the term.

Weekly Course Overview

W	DATES	PLACES	ASSIGNMENTS
1	March 29 & 31	Mount Baker to Bellingham Bay	
2	April 5 & 7	Nooksack River / Boundary Bay / Marine Border	
3	April 12 & 14	Fraser River Estuary	Place Portfolio 1
4	April 19 & 21	Burrard Inlet & Coast Mountains	
5	April 26 & 28	Howe Sound & Sunshine Coast	Reflection Journal Check
6	May 3 & 5	San Juan & Gulf Islands Archipelago	Place Portfolio 2
7	May 10 & 12	Elwha River / Hood Canal / Olympic Peninsula	
8	May 17 & 19	Nisqually River / Olympia	
9	May 24 & 26	Duwamish River / Seattle	Place Portfolio 3
10	May 31 & June 2	Skagit River Estuary / Return to Here	Presentations / Reflection Journal Check
F	June 9 – 8-10am	Final Class Celebration	Presentations / Reflections / Place Portfolio 3

Pre-Class Email

Dear SALI 201 students,

This email is going out to all students enrolled in SALI 201 this Spring as well as students on the waitlist. We are writing with an invitation to do three things ahead of the first day of class on Tuesday, March 29:

- 1. **Fill out this** <u>short survey</u>. This survey will give us a sense of who you are, your interests, and your knowledge and experience in the Salish Sea to date (and it's okay if it's very little this class is designed to support you learning where you live).
- 2. **Review the Canvas site for the course.** Students on the waitlist: if you would like access to the Canvas course, reply to this email and we can add you as a temporary student viewer.
- 3. **Engage with the** <u>Where Is the Salish Sea StoryMap</u>. This StoryMap is designed by Dr. Aquila Flower, a professor and cartographer here at WWU. This StoryMap will give you a basic orientation to the Salish Sea, which we will review on our first day of class.

Thank you for your interest in SALI 201! For students enrolled in the class, please know there is a sizable waitlist for the class. If you're thinking about dropping this course for one reason or another, this is a good time to act so that other students can enroll.

Thank you,

Your SALI 201 Instructional Team - Dr. Baker, Dr. Baloy, & Caitlyn Blair

Week 1: Whitecap to Whitecap + Xwe'chi-eXen (March 29 & 31)

Learning Outcomes

- Define Salish Sea, bioregion, watershed, ecosystem, ecotope, and "two-eyed seeing"
- Describe the Salish Sea and its primary ecotopes from whitecap to whitecap, with specific example focused on Mount Baker to Bellingham Bay and the Nooksack River watershed
- Gain practice in "two-eyed seeing" by connecting ecosystem science and Indigenous knowledge systems with local and recent event: Xwe'chi'eXen / Cherry Point coal terminal proposal

Places

- Mount Baker
- Nooksack River
- Bellingham Bay
- Xwe'chi'eXen / Cherry Point
- Salish Sea

Reflection Prompts

- Use your own words to write definitions for the following major terms this week:
 - Salish Sea
 - Bioregion
 - \circ Watershed
 - Ecosystem
 - Ecotope
 - "Two-Eyed Seeing"
- Draw a cross-section of the Nooksack River watershed and label the primary ecotopes we discussed in class
- Share a two-paragraph description of your assigned ecotope article
- Describe your group's discussion of the Xwe'chi'eXen case study

Learning Materials

Complete Before Class on Tuesday

- Step 1: Complete the course survey if you haven't already.
- Step 2: Review <u>Where Is the Salish Sea (StoryMap)</u> (15min)

Complete Before Class on Thursday

- Step 1: Read <u>Knowing Home Chapter 1: Braiding Indigenous Science with Western</u> <u>Science</u> (30min)
- Step 2: Complete the materials for your assigned ecotope and <u>come to class with</u> <u>notes</u> to share with your salmon and orca families (1hr)
 - 1: Alpine
 - Watch: <u>Survivors of the Flood Bill James</u> (11min)
 - Listen: <u>Mount Baker's Last Potlatch Pauline Hillaire</u> (5min)
 - Read: Introduction to Mount Baker and the Nooksack River Watershed (1hr)
 - 2: Forests & Meadows
 - Watch: <u>Nettles: Generations of Traditional Knowledge</u> (4min)
 - Watch: <u>How Nettle Saved the People</u> (5min)
 - Read: <u>Historical Indigenous Land-Use Explains Plant Functional Trait</u> <u>Diversity</u> (1hr)
 - 3: Rivers & Estuaries
 - Watch: <u>Silverweed</u> (2min)
 - Watch: <u>Homecoming</u> (6min)
 - Read: <u>The Effect of Climate Change on Glacier Ablation and Baseflow</u> <u>Support in the Nooksack River Basin and Implications on Pacific</u> <u>Salmonid Species Protection and Recovery</u> (1hr)
 - 4: Intertidal
 - Watch: <u>Clams: Growing in Community Together</u> (5min)
 - Watch: <u>A Wall Worth Building</u> (5min)
 - Read: <u>Ancient Clam Gardens</u>, <u>Traditional Management Portfolio</u>, and the <u>Resilience of Coupled Human-Ocean Systems</u> (1hr)
 - 5: Marine & Kelp Forests
 - Watch: Salmon Woman Bill James (5min)
 - Watch: <u>Salmon: More Than Just Food</u> (5min)
 - Read: <u>Sources of Corrosive Bottom Water to Bellingham Bay</u>, <u>Washington State</u> (1hr)

Additional Links & Materials

• What's an Environmental Impact Statement

Week 2: Water Knows No Borders (April 5 & 7)

Learning Outcomes

- Describe the formation of the Canada-US border
- Recognize borders as recent and contested
- Define Indigenous sovereignty and settler colonialism, and provide examples in the Salish Sea region
- Compare and contrast treaty-making processes in Washington State and British Columbia

Places

- Boundary Bay
- Nooksack River / floodplain
- Salish Sea marine border
- 49th parallel
- Roberts Bank

Reflection Prompts

- Draw and label a timeline of the Canada-US border in Salish Sea historical context
- In your own words, explain the phrase "water knows no borders" using examples from this region
- Compare and contrast treaties and other nation-to-nation agreements in the Salish Sea
- Explain why borders are recent and contested

Learning Materials

Complete Before Class on Tuesday

- Step 1: Read Chapter 1: "British Columbia"? Indigenous Peoples Confront Genocide in <u>Challenging Racist BC</u> - pp. 11-23 (30min)
- Step 2: Watch <u>Inaugural Treaty Day Recognition</u> by Children of the Setting Sun (25min)
- Step 3: Read Section 2: Context in the <u>State of the Salish Sea Report</u> pp. 17-40 (30min)

Complete Before Class on Thursday

- Step 1: Listen to Episode 4.2: Terminal from Future Ecologies podcast (1hr)
- Step 2: Read your salmon family / orca pod's assigned treaty or court case summary (10min)
 - United States
 - J Pod: <u>Treaty of Point Elliott</u>

- K Pod: <u>Summary of Boldt Decision</u>
- L Pod: <u>Shellfish Pact Post-Rafeedie</u>
- Chinook: <u>Culvert Case</u>
- **BC**
- Chum: Aboriginal Fisheries in British Columbia
- Pink: <u>Sparrow Case</u> + <u>Leona Sparrow Video</u>
- Sockeye: <u>Guerin Case</u>
- Coho: <u>Douglas Treaties</u>

Additional Links & Resources

- <u>State acts to finally settle disputed Nooksack River Basin water rights</u>
- Adjudication of Water in the Nooksack
- Whose Land Is It?
- <u>Whose Water Is It Anyway?</u>
- Aboriginal Rights / Title
- <u>To Fish as Formerly</u> (5min)
- <u>Native-land.ca</u> (Treaties toggle)
- <u>Creating Order: The Liberals, the Landowners, and the Draining of Sumas Lake, British</u> <u>Columbia</u>
- Challenging Racist BC
- SALI 201 Slides

Roberts Bank Materials

- Video Overview of Proposed Roberts Bank T2 Project
- <u>Summary Key Findings</u> of independent environmental impact assessment (full report <u>here</u>)
- <u>Semiahmoo Nation: Public Hearing regarding Roberts Bank T2 Project</u> (30min)
- <u>US EPA Letter regarding Roberts Bank T2 project</u> (10min)

Week 3: Fraser River (April 12 & 14)

Learning Outcomes

Water Governance

- Define water governance as a concept
- Recognize the ways water has been managed or taken care of over time
- Explain the complexities of water governance and management between multiple governing agencies (Tribal, federal, state) across borders

Salmon Cycles

- Name the elements of the salmon cycle stages
- Identify the relationships between salmon cycles, ecotopes, and water management
- Analyze the impacts of human activities on the salmon cycle

Places

- Fraser River
- Columbia River

Reflection Prompts

- Define water governance.
- What is something you learned today about water governance systems? Reflect on the ways caretaking and management have changed over time.
- What did you think of Ruth Miller's salmon meditation? In what ways did this influence your understanding of the importance of salmon as a keystone species in the Salish Sea?
- How is water cared for and/or managed in your place?
- Think about the salmon cycle stages. Are any of these stages present in your specific place currently or historically? Have there been changes to your place that now don't allow for salmon to be present?

Learning Materials

Complete prior to Tuesday class

- Review the following story maps
 - Story Map The Fraser River A Canadian Heritage River
 - Story Map Salmon Habitat in the Lower Fraser
 - State of the Salish Sea Report Fraser River Vignette

Complete prior to Thursday class

- Read your salmon family / orca pod's assigned section of <u>Revitalizing Indigenous</u> <u>Law with the Lower Fraser Fisheries Alliance - Legal Traditions of the Peoples of</u> <u>the Lower Fraser Summary Report</u>
 - O J pod: Volume 1
 - O K pod: Volume 2
 - Chinook: Volume 3
 - O Chum: Volume 4
 - O Pink: Volume 5
 - O Sockeye: Volume 6
 - O Coho: Volume 7
 - O L pod: End Matter

- Kehoe et al.: Conservation in heavily urbanized biodiverse regions requires urgent management action and attention to governance
- <u>Musqueam Animation History of the Fraser River Delta</u> (see also <u>Musqueam Teacher</u> <u>Kit</u>)
- <u>Toward a Vision for Salmon Habitat in the Lower Fraser River</u>
- Sto:lo Atlas
- Armstrong, J. (2013). Indigenous Water Governance and Resistance: A Sylix Perspective. In Wagner, J. (Eds.), *The Social Life of Water* (pp 239-254). Berghahn Books.
- Fraser River from headwaters
- Pronunciation guide -Halq'eméylem alphabet
- <u>Multiple Ontologies of Water</u>

Week 4: Burrard Inlet / Coast Mountains (April 19 & 21)

Learning Outcomes

- Situate the Salish Sea carbon economy in global context
- Compare and contrast the Trans Mountain pipeline expansion proposal with other fossil fuel proposals in the Salish Sea, including compare/contrast environmental impact assessments, Indigenous rights frameworks, and Indigenous legal principles
- Describe relationships between orca and human population changes

Places

- Burrard Inlet
- Coast Mountains
- Tar Sands to China / Pacific Rim

Reflection Prompts

- What is something you learned about the relationship between the proposed Trans Mountain Expansion and its projected effects on Orca whales?
- What surprised you about Weigh Anchor?
- Reflect on your specific place, what are some ways your place may be affected by TMX expansion?
- Research to find out if there are any proposed projects at your place. (This could be clean-up projects, shoreline development projects, etc.). Describe the ways this could change the ecology and human activity in your place.

Learning Materials

Complete prior to Tuesday class

Everyone read the following:

- <u>Tsleil-Waututh Nation Assessment Executive Summary</u>
- State of the Salish Sea Report Vignette 8: Connection to Place

Based on your assigned number, read the following from the <u>Tsleil-Waututh Nation</u> <u>Assessment</u> and be prepared to share in your pods/families:

- 1: Chapters 3 & 4 (p. 6-25) (30min) Group 1
- 2: Chapters 5 & 6 (p. 26-49) (30min) Group 2
- 3: Chapters 7, 8, & 9 (p. 55-61) (30min) Group 3
- 4: Chapters 10-12 (p. 62-70) (30min) Group 4
- 5: Chapters 13-15 (p. 71-84) (30min) Group 5

Complete prior to Thursday class

Read the following set of readings for your group number (same groups as above) and be prepared to share in your pods/families:

- 1: Seattle Times Hostile Waters Series Part 1: <u>Orcas thrive in a land to the north</u> (15min)
- 2: Seattle Times Hostile Waters Series Part 2: <u>How a generation of killer whales</u> was taken from Puget Sound (15min)
- 3: Seattle Times Hostile Waters Series Part 3: <u>Hunger</u> (15min)
- 4: Seattle Times Hostile Waters Series Part 4: <u>The Roar Below: How our noise is</u> <u>hurting orcas' search for salmon</u> (15min)
- 5: Seattle Times Hostile Waters Series Part 5: <u>Chasing a Memory</u> (15min)

- See note below re: orca taskforce and Sightline Institute materials
- Consider including Rudy Reimer's works on the alpine for this lesson: <u>THE MOUNTAINS</u> <u>AND ROCKS ARE FOREVER: LITHICS AND LANDSCAPES OF SKWXWÚ7MESH UXWUMIXW</u>
- Burrard Inlet Environmental Science and Stewardship Agreement
- Burrard Inlet Action Plan
- SALI 201: Trans Mountain Slides

Week 5: The Northern Salish Sea (April 26 & 28)

Learning Outcomes

- Review defining characteristics of the ecotopes (ecotope comprises all the constituent parts found at that locality on the same scale, such as the physiotope (landform), the geotope (rocks and soil) and the biotope (living flora and fauna including humans) [https://www.google.com/search?client=firefox-b-1-d&q=ecotope+examples]
- Evaluate the impacts of settlements on various ecotopes, especially tourism and timber harvesting
- Develop map reading and map making skills

Places

- Howe Sound
- Sunshine Coast
- Gibsons
- Campbell River
- Quadra Island

Reflection Prompts

- What is a map?
- What is one example of the impact that settlement has on the ecotope in the Northern reaches of the Salish Sea.

Learning Materials

Complete before Tuesday:

- Group 1. Alpine Ecotope
 - Tenure and Land Use
 - Coast Mountain Ecology
 - Squamish & Lil'wat Cultural Center
 - Virtual tour of Cultural Center
 - Indigenous-led 2030 Winter Olympic bid
- Group 2. Forest & Meadow
 - <u>Western Forest Products</u>
 - Letter from Provincial Government to Western Forest Products (2007)
 - <u>Sustainability Report</u>
 - <u>Kwakiutl first nation protest Western Forest Products action on Vancouver</u> <u>Island</u>
 - Letter from Kwakiutl Band Council to Ministry of Forests and Range (2007)

- <u>Carbon offsets in Quadra forests</u>
- Group 3. Rivers & Estuaries
 - <u>Squamish Estuary Reclamation</u>
 - Welcome to Squamish
- Group 4. Intertidal
 - <u>Eagle View Heights promotional video</u>
 - Marco Hatch describing clam garden technology
 - Hakai magazine article
- Group 5. Marine
 - Kwakwaka'wakw fisheries fighting fish farms in 2007
 - LoU between First Nations and BC government re fish farms (pdf)
 - First Nations Leadership Council supports fish farm LoU
 - <u>5 Salmon Fish Farms Decommissioned</u>

Thursday, we'll meet at the Map Room in the Library.

Additional Links & Resources

NGOS with BC as a focus:

- <u>https://www.stand.earth</u>
- <u>https://sierraclub.bc.ca/campaigns/</u>
- <u>https://www.raincoast.org</u>
- <u>https://ancientforestalliance.org</u>
- <u>https://www.wildernesscommittee.org</u>

Educational sites

- <u>https://www.thecanadianencyclopedia.ca/en/article/vancouver-island-coal-strike</u>
- <u>https://www.theglobeandmail.com/news/british-columbia/quinsam-mine-closing-</u> <u>marks-end-of-an-era-for-vancouver-island-coal/article28390744/</u>
- <u>https://opentextbc.ca/geography/chapter/7-3-history-of-commercial-logging/</u>
- <u>https://www.pulpandpapercanada.com/looking-west-historical-overview-of-the-industry-in-bc-1000141957/</u>
- Island in the Salish Sea
- Howe Sound UNESCO
- OceanWatch Howe Sound

Transnational connections

- Past, present, future
- non-Coast Salish / Kwakwaka'wakw elements of the Salish Sea
- fisheries management, cultural values,
- Present resource extraction: timber, fishing settler colonialism
- Clam gardens Quadra

Week 6: Vancouver Island & Salish Sea Archipelago (May 3 & 5)

Learning Outcomes

- Describe the value of reef nets, clam gardens, and camas to Coast Salish people
- Explain the importance of relationality and reciprocity as political and economic concepts

Places

- Saanich Peninsula
- Gulf Islands
- San Juan Islands

Reflection Prompts

- Explain relationships and reciprocity using the example of camas harvesting, clam gardens, and/or reef net fishing
- Define "two-eyed seeing" using the example of camas, clam, and/or salmon knowledge, practice, and science

Learning Materials

Complete by Tuesday:

- All students read: <u>Ocean Cultures: Northwest Coast Ecosystems and Indigenous</u> <u>Management Systems</u> by Nancy Turner & Darcy Mathews (1hr)
- Salmon Families & Orca Pod Readings (30min):
 - J Pod: <u>Cowichan River Story Map</u> (click through all sections)
 - K Pod: <u>Sea Gardens Story Map</u> (click through all sections, and read closely the Salish Sea-adjacent sections)
 - L Pod: <u>Saltwater People</u> Part 1 (pp 9-60)
 - Chinook: <u>Saltwater People</u> Part 2 (pp 55-82)
 - Chum: Coast Salish Place Names of the San Juan Islands
 - Coho: <u>Gulf Island Ecosystem Community Atlas</u> Part 2 pp 11-40
 - Pink: <u>Gulf Island Ecosystem Community Atlas</u> Part 3 pp 41-70
 - Sockeye: <u>Gulf Island Ecosystem Community Atlas</u> Part 1 & Part 4 pp 1-10 + 71-85

Complete by Thursday:

- Listen to Camas, Cores, & Spores on Future Ecologies podcast (45min)
- Watch <u>Puyallup Tribe hosts c'abid (camas) harvest at PLU</u> (5min)

- Thursday at Camas Patch 5 stations
- Picnic after class?
- Discuss in class: Black Salt Spring <u>Emma Stark John Craven Jones Sylvia Stark</u>

Week 7: Elwha River / Olympic Peninsula (May 10 & 12)

Learning Outcomes

- Describe the process of undamming the Elwha River
- Name who/what was involved in the process
- Evaluate the relationship between the National Parks System and Indigenous nations in Olympic National Park
- Recognize the multiple ways to tell a story or create a narrative about a place

Places

- The Elwha River
- Olympic National Park

Reflection Prompts

- Why is camas ecologically, socially, and culturally significant?
- Reflect on the multiple ways to tell a story or create a narrative about a place (think about the story you want to tell about your place)

Lesson Materials

Complete by Tuesday:

- Listen to <u>Camas, Cores, & Spores</u> on Future Ecologies podcast (45min)
- Watch <u>Puyallup Tribe hosts c'abid (camas) harvest at PLU</u> (5min)

Complete by Thursday:

- Read this article about the agreement between Indigenous nations on the Peninsula and the Parks Service: <u>NWIFC Olympic National Park Sign Pact</u>
- Read this article about removing dams from the Elwha River: <u>The World's Largest Dam</u> <u>Removal Project Relevator Article</u>
- Listen to this podcast from Future Ecologies also about removing the Elwha dam: <u>FE1.10 Dams: Rushing Downriver (Part 2)</u>

- <u>Return the Parks to the Natives- Atlantic Magazine</u>
- <u>Recolonizing the Elwha</u>
- The World's Largest Dam Removal Project Relevator Article
- <u>Undamming the Elwha Film</u>
- <u>NWIFC Olympic National Park Sign Pact</u>

Week 8: Hood Canal / Nisqually / Olympia (May 17 & 19)

Learning Outcomes

- Examine how state governance functions, with a focus on Olympia and the Washington State Legislature
- Explore the history of the Nisqually River, including Billy Frank Jr. fish-ins and recent watershed management plans and systems
- Comparing and contrasting different aquatic ecosystems using the lower Salish Sea (e.g., Hood Canal, rivers and estuaries, ocean circulation / freshwater-saltwater mixing)

Places

- The Nisqually River
- Olympia, home to the State Capitol

Reflection Prompts

- Who are the elected officials of your place and what environmental policy would you ask these elected officials to enact?
- Connect Thursday's discussion of the Nisqually Watershed Management Plan to the Lower Fraser River Fisheries Alliance Revitalizing Indigenous Law discussion in Week 3.

Lesson Materials

- READ: <u>Nisqually Tribe watershed management plan</u>
 - Everyone: Introduction and Background pp 14
 - Section 1:
 - J Pod: Mission & Objective / Obligations and Expectations (1-5)
 - Sockeye: Planning Process in the Nisqually Watershed (6-15)
 - Section 2:
 - K Pod: Growth and Land Use (18-24)
 - Chinook: Water Rights (44-56)
 - Section 3:
 - L-pod: Yelm Sub-Basin Action Plan (83-87)
 - Pink: Mashel-ohop Sub-Basin Action Plan (88-98)
 - Section 4:
 - Coho: Water Related Programs, Plans and Processes (101-108)
 - Chum: State Environmental Policy Act (140-154)
- WATCH: <u>A Conversation with Representative Debra Lekanoff</u> (45min)

Week 9: Seattle (May 24 & 26)

Learning Outcomes

- Examine the causes and effects of natural events
- Analyze potential threats and risks of natural events for Seattle and other places in the Salish Sea
- Compare and contrast disaster response and preparation at the municipal, state, and regional scales, as well as community connection and organizing

Places

- Seattle
- Duwamish River
- Mount Rainier
- Cascadia Subduction Zone

Reflection Prompts

- Describe how at least 2 different types of events might affect the Salish Sea and your assigned place
- This week we will encounter four roles for social change Helper, Advocate, Rebel, Organizer. Which of the four roles resonates most with you and why?

Learning Materials

- **READ OR LISTEN:** <u>The Really Big One</u> + <u>How to Stay Safe When the Big One Comes</u>
- Note: there's an option at the link to listen to this instead if you want to walk/listen for this one. (45min)
- J POD: Earthquakes 1
 - READ: <u>Earthquake Key Points (City of Seattle)</u> + <u>The Most Doomed City in</u> <u>Canada</u> (30min)
 - LOOK AT MAPS: <u>Earthquake Canada Map</u> (Zoom to Salish Sea) + <u>WA Geologic</u> <u>Hazard Map</u> (Select Map Layers: Earthquakes and Seismic Scenarios / Search for Seattle) (15min)
- K POD: Earthquakes 2
 - O READ: Five Puget Sound Cities & Earthquake Risk (15min)
 - READ: Encouraged but not required: <u>When the mountain dwarfs danced</u> (30min)
- L POD: Tsunamis
 - READ: Tsunamis and Seiches Key Points (City of Seattle) (10min)
 - WATCH: <u>Tsunami Wave Simulation & Current Velocity Videos</u> for Washington State, Bellingham, San Juan Islands (15min)

- LOOK AT MAP: <u>WA Geologic Hazard Map</u> (Select Map Layer: Tsunamis / Search for Seattle) (20min)
- CHINOOK: Flooding
 - READ: <u>Floods Key Points (City of Seattle)</u> + <u>Flood Modelling and Mapping in BC's</u> <u>Lower Mainland</u> (Fraser Basin Council) (30min)
 - LOOK AT MAP: <u>Flood Hazard Map (WA Department of Ecology)</u> (Search for Seattle and other cities) (15min)
- CHUM: Landslides
 - READ: Landslides Key Points (City of Seattle) + Oso Landslide StoryMap (30min)
 - LOOK AT MAP: <u>WA Geologic Hazard Map</u> (Map Layer: Landslides / Search for Seattle) (15min)
- COHO: Fires
 - READ: <u>Fires Key Points (City of Seattle)</u> + <u>Heat Wave Spread Fire That 'Erased'</u> <u>Canadian Town</u> (30min)
 - LOOK AT MAP: <u>Washington Wildfire Map</u> + <u>Air Quality Map</u> (15min)
- PINK: Volcanoes
 - READ: <u>Volcano Key Points (City of Seattle)</u> + <u>What will happen when Mount</u> <u>Rainier erupts?</u> (10min)
 - WATCH: Mount Rainier: Active Volcano (5min)
 - O LISTEN: Mountain Songs (Crosscut Podcast) (15min)
 - LOOK AT MAP: <u>USGS Map Volcanic Hazards of Mount Rainier</u> (15min)
- SOCKEYE: Heat Domes
 - READ: <u>An Unprecedented Pacific Northwest Heat Wave Rings Alarm Bells</u> (35min)
 - WATCH: <u>Canada heatwave cooks up to one billion shellfish alive</u> (2min)
 - WATCH: June 2021 heat dome created mass mussel mortality in the Salish Sea (2min)
 - WATCH: <u>Washington's historic heat wave could have long-term impacts on</u> <u>shellfish industry</u> (3min)

- Four Roles for Social Change
- Reminder that our region has had a huge population growth due to intentional development of these cities and business practices. This continues as with promotion of the region as a tech hub, for example, through the Cascadia Innovation Corridor and other initiatives.
- Meanwhile, we live in a geologically active space amidst a shifting climate. If we imagine a scenario where 10 million more people move to this region due to economic growth, what are the projections of these risks that you looked at? What do we anticipate in relation to these disasters?

Week 10 Skagit Valley (May 31 & June 3)

Learning Outcomes

- Describe the 13-moon lunar cycle as developed by the Swinomish Community Tribal Health Program.
- Consider the principle of informal education that is predicated on learning as a process over time that is facilitated by communities, parents, friends, and leaders

Places

- The Skagit Valley
- Swinomish Indian Tribal Community

Reflection Prompts

- Which of the 13 Moons is your birth moon? What is happening during this time/month?
- Reflect on two-eyed seeing in reference to one of the 13 Moons guiding principles (pg. 5 of <u>13 Moons Curriculum Guide link</u>)

Learning Materials

- <u>Saltwater Peoples</u>: Read "The Saanich Seasonal Cycle"
- <u>13 Moons First Foods and Resources Curriculum</u>
 - Read the Introduction and Guiding Principles
 - Under which of the 13 moons were you born? Read about that moon and the associated activities in the 13 Moons First Foods and Resources Curriculum.
- Visit <u>13 Moons at Work Facebook page</u>
 - Read about the activities of the Swinomish Community Health team and watch a couple of their videos.