JAMESTOWN S'KLALLAM TRIBE
1033 Old Blyn Highway, Sequim, WA 98382 360/683-1109 FAX 360/681-4643

Documents and Links

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1. Jimmycomelately Ecosystem Restoration – monitoring report 2004-2011. https://jamestowntribe.org/wp-content/uploads/2018/09/4-jcl-Prelim-Final.pdf
2. Jimmycomelately Ecosystem Restoration – Lessons learned (2008). https://salishsearestoration.org/images/8/8b/Shreffler_et_al_2008_jimmycomelately_lessons_learned.pdf
3. Protecting and Restoring the Waters of the Dungeness – (2007). https://jamestowntribe.org/wp-content/uploads/2018/08/1-Protecting-and-Restoring-Dungeness.pdf
4. Protecting and Restoring the Waters of Sequim Bay – (2013). https://jamestowntribe.org/wp-content/uploads/2020/05/Protecting-and-Restoring-the-Waters-of-Sequim-Bay-2013.pdf
5. Dungeness Drift Cell: Parcel Prioritization and Conservation Strategy– (2016). https://jamestowntribe.org/wp-content/uploads/2019/03/Dungeness_DriftCellConservationStrategy_07-16_noappendices.pdf
6. Jamestown S'Klallam Tribe Climate Vulnerability Assessment and Adaptation Plan – (2013) https://jamestowntribe.org/wp-content/uploads/2018/09/3-JSK_Climate_Change_Adaptation_Report_Final_Aug_2013s.pdf
7. 2020 State of our Watersheds Report. http://files.nwifc.org/sow/2020/state-of-our-watersheds-sow-2020-final-web.pdf#page=1

8. Dungeness Watershed Salmon Recovery Planning Notebook: A Response to the Six Questions from the Development Committee of the Shared Strategy for Puget Sound - (2004) https://jamestowntribe.org/wp-content/uploads/2018/08/4-Dungeness-Watershed-Salmon-Notebook.pdf
9. Comprehensive Plan (2016) https://jamestowntribe.org/wp-content/uploads/2018/05/Comprehensive_Plan_Revised_in_2016_Final.pdf
10. Multi-Hazard Mitigation Plan (2011) https://jamestowntribe.org/wp-content/uploads/2018/05/Tribal_Multi-Hazard_Plan.pdf

WATER MONITORING STRATEGY FOR THE JAMESTOWN S'KLALLAM TRIBE

Date: December 31, 2018
Time period this strategy covers:
2019 to 2028
Tribal contact: Robert Knapp
Phone: (360) 681 4666
Email: rknapp@jamestowntribe.org

I. Introduction

The Jamestown S'Klallam Tribal community is located on the northern Olympic Peninsula of Washington State, approximately 70 miles northwest of the city of Seattle. The Dungeness Watershed is our Tribe's ancestral home. The Jamestown band of S'Klallams were signatories to the Point No Point Treaty in 1855. In 1874, during early white settlement, the S'Klallam Indians pooled together $500 in gold coin in order to purchase land to avoid being sent to a reservation 90 miles away. The refusal to move to a reservation eventually caused the S'Klallam to lose their Tribal status, but in 1981 the Tribe regained their federal recognition. The Tribe then purchased land in nearby Sequim Bay to create a reservation with an administrative facility and community center. Available funds only allowed the purchase of 11 acres. Since this modest beginning the Tribe's social, health, economic and natural resource programs, as well as its land- base, have grown significantly. Tribal land holdings now exceed 1500 acres of non-contiguous parcels scattered in numerous watersheds within the Tribe's Usual and Accustomed (U & A) treaty area (2018 Report to Tribal Citizens-JST).

Overview of the Jamestown S'Klallam Tribe federal lands (reservation and Trust lands) only:

- The Reservation totals approximately 276 acres[1].
- Trust lands total approximately 288 acres[1].

Overview of the Jamestown S'Klallam Tribe Tribal Waters (includes lands managed by others):

- Dungeness Watershed 172,517 acres (270 sq.-mi.) and 546 mile streams and Rivers[2]
- Dungeness Bay (1.2 sq.-mi. Inner Bay at MLLW)[3]
- Dungeness River (31.9 miles), Gray Wolf R. (17.4 miles)[2]
- Sequim Bay Watersheds 35,351 acres (55 sq.-mi.)[4]
- Sequim Bay (7.6 sq.-mi. -at MLLW)[5]
- There are 3 major potable aquifer systems[6].

1. *2018 Report to Tribal Citizens-JST*
2. *Dungeness River Area Watershed Management Plan. 1993. Dungeness Watershed Committee coordinated by Clallam County.*
3. *Rensel, J.E. 2003. Dungeness Bay Bathymetry, Circulation and Fecal Coliform Studies. Phase 2. Prepared by Rensel Associates Aquatic Science Consultants, Arlington, Washington for the Jamestown S'Klallam Tribe, Sequim Washington and the U.S. Environmental Protection Agency, Seattle, Washington. L. Muench, Project*
4. *Sequim Bay Watershed Management Committee, 1991 as reported in Sequim Bay Land Use Inventory, JST 2013.*
5. *Sequim Bay Watershed Management Plan (*SBWMC 1989*) as reported in WRIA 18 Watershed Plan, ENTRIX, Inc. Elwha-Dungeness Planning Unit. May 2005. Elwha-Dungeness Watershed Plan, Water Resource Inventory Area 18 (WRIA 18) and Sequim Bay in West WRIA 17. Published by Clallam County. Pg. 2.10-12.*
6. *Thomas, B.E., L.A. Goodman, and T.D. Olsen. 1999. Hydrogeologic assessment of the Sequim-Dungeness Area, Clallam County, Washington. U.S. Geological Survey, Water Resources Investigations Report 99-4048, 165 p.*

This monitoring strategy focuses on the Dungeness and Sequim Bay Watersheds. Currently, in the Dungeness and Sequim Watersheds, we (the Jamestown S'Klallam Tribe and Partners) are monitoring all nine parameters described in the section 106 Clean Water Act Tribal guidance. Due to budget constraints, Macroinvertebrates are only monitored at select stations in both watersheds. Further, the Tribe intends to monitor other watersheds within our Usual and Accustomed Area as needed and as resources allow, since much of the area is rapidly converting from rural/ forest practices to residential development. Monitoring the impacts of the land use changes to surface and groundwater and informing policy makers of these changes is one of our overarching goals. Many water bodies in the Jamestown S'Klallam Tribe's land base are on the states 303 (d) list of impaired water bodies (see Attachment 1 below). In tandem with our water quality monitoring the Tribe is monitoring stream and river habitat, and implements habitat restoration projects. Habitat conservation and restoration efforts are also ongoing, particularly in partnership with local, state, and federal partners. Clean water is an important component of habitat and healthy habitat can have important benefits for clean, cool, and plentiful water.

The Tribe's ability to properly address the water quality impacts and problems is limited by the disperse nature of its land holdings and the diverse nature of the numerous watersheds in which they occur. The Tribe has a Water Quality Work Plan which guides the development of the Tribe's administrative and technical capacity to establish an environmental management program for Tribal lands and waters, and to fulfill the requirements of the Clean Water Act, the Endangered Species Act, the Safe Drinking Water Act and other federal statutes. Water quality goals are reviewed drafting or each CWA106 workplan and TAR submitted to EPA, based on previous goals and newly emergent issues.

II. Monitoring Objectives

The Jamestown S'Klallam Tribal water quality monitoring program is in the Natural Resources department. This department is also responsible for shellfish management, fisheries management, water resources, habitat protection and environmental planning programs. We have been monitoring surface waters for nearly 25 years. Following the downgrade by Washington State Department of Health of the Dungeness Bay commercial shellfish beds, the Tribe's monitoring efforts became more focused and refined. In 2000, the Lower Dungeness River and Matriotti Creek were the focus of a Washington State Department of Ecology Total Maximum Daily Load Study.

In 2001 the Clallam County Commissioners approved the development of the Sequim - Dungeness Clean Water District, which extends from Bagley creek to Miller Peninsula. The general areas of the Clean Water District were used to designate a Marine Recovery Area in Clallam County as required by State code in 2006. During this same time period a technical team called the Clean Water Workgroup (CWWG) was developed. The CWWG participants include the US Fish and Wildlife Service, local citizens, Washington State Department of Ecology (Ecology), Washington State Department of Health (DOH), Clallam County Environmental Health (CCEH), Clallam County Conservation District (CCD), Washington State University Extension, Pollution Identification and Correction partners (PIC), Clallam County Streamkeepers (CCSK) staff and volunteers, and the Jamestown S'Klallam Tribe (Tribe). This group meets quarterly to focus on water quality issues, develop and discuss clean up progress as well as coordination and collaboration on various water quality programs and studies.

The Jamestown S'Klallam Tribe has a Comprehensive Plan which guides the work programs and priorities of the staff. The goals of the water quality monitoring program stem from a goal of the Comprehensive Plan:

> *The Jamestown S'Klallam Tribe has maintained the right to fish, shellfish, hunt and gather. But that right is empty if there are no fish to catch, no clams to dig, no elk to hunt or berries to gather. Our greatest natural resource concern is that the environment these natural resources live in and the habitat that supports healthy populations be protected. If threatened with harm, the environment must be protected and kept in a highly productive state. If damaged, the habitat must be restored so that fish and wildlife may prosper. If natural resources are in decline, they must be improved so that future populations may thrive.*

Sub-goals of the Comprehensive Plan include:

> *... healthy, sustainable resources for harvest opportunities, to benefit economically from commercial harvests, to put food on our tables as a result of subsistence harvest and to have access to traditional resources for cultural purposes and for ceremonies.*

The relevant objectives from the Comprehensive Plan have been selected as our water quality program objectives and are listed here:

<u>Fresh Water Quality - Identification of Bacteria Pollutant Sources</u>

1. Contract with Clallam County Environmental Health to continue to implement the Pollution Identification and Correction Plan (PIC).
2. Conduct PIC segmented monitoring and identify bacterial sources through segmented sampling.
3. Submit PIC segmented data to STORET.
4. Continue to map PIC focus areas and Trend monitoring sites.

Marine Water Quality – Harmful Algal Blooms

1. Continue to gain understanding of harmful algal blooms and associated biotoxins
2. Preform weekly summer and bi-weekly winter sampling for toxic phytoplankton, chlorophyll, temperature, salinity and nutrients.
3. Submit data to NOAA's Sound Toxins Database.

Water Quantity

1. Track flow and temperature as long-term water quality goals.
2. Protect in-stream flows for fish and water conservation by local irrigators and other entities.
3. Continue to support the Dungeness River Management Team by protecting instream flows and conservation.

Monitoring Objectives	
Program Area	**Objectives (examples)**
Overall Water Quality Program	1. Assess the overall water quality of the waters adjacent to and on reservation and trust lands, and conduct periodic reassessments (Tribal Assessment Report yearly (TAR)). 2. Use monthly PIC Trends monitoring to assess the water quality and establish if the water quality is meeting state standards on and off Tribal lands. 3. Through regular monitoring assess if marine waters support shellfish harvest and consumption. 4. Continue to provide field and technical support to PIC partners. 5. Develop protection and improvement plans for water resources and habitat. 6. Monitor habitat improvement projects to evaluate if they are achieving project goals.
Sound Toxins Monitoring	1. Preform weekly summer and biweekly winter sampling for toxic phytoplankton, chlorophyll, temperature, salinity and nutrients. Provide data to NOAA's SoundToxins database. 2. Analyze existing data for any trends and see if there are improvements in the watershed. 3. Evaluate the effectiveness of best management practice (BMP) installation.
Water Quality Standards	1. Continue to use State Water Quality Standards and identify areas that are not meeting state standards.
Geographic boundary of program	1. Continue focus area of Dungeness and Sequim Bay watersheds. 2. Assess other watersheds as needed due to land use changes or upcoming planning decisions. As capacity allows, we will monitor other water bodies and other watersheds.

III. Monitoring Design

The Jamestown S'Klallam Tribe's monitoring objectives will be met through a combination of assessment tools including water quality sampling, flow monitoring, land use observations, and statistical analysis. Since the inception of a nonpoint source management program for the Jamestown S'Klallam Tribe, we have followed a mix of formal and informal methodology to identify areas and waterbodies where beneficial uses for Tribal priorities are impaired by nonpoint sources. In 2014 a formal Pollution Identification and Correction Plan was designed by CCD, CCEH, CCSK, public citizens, and the Tribe. The PIC plan is designed to map out a strategy for identifying and correcting sources of water pollution.

The process for identifying the areas and waterbodies includes, in this approximate order:

- Input from Tribal citizens, who are intimately familiar with the watersheds and the changes occurring within them.
- Input from the CWWG: Review of PIC trends data and segmented sampling data.
- Frequent consultation with area professionals, primarily local, state, federal and tribal biologists and planners.
- Tribal Council approval of Natural Resources staff recommendations.

Monitoring Design					
Program Area	**Design**	**# Sites**	**Frequency**	**Resources (optional)**	**Brief Program Description**
Overall Water Quality Nonpoint Source Program Water Quality Standards	Two watersheds; Sequim Bay and Dungeness that include several subbasins. Approved QAPPS for both watersheds detailing stations.	Sequim Bay – 6 sites currently (generally at the mouth of creeks) * Dungeness – 50 sites currently (located strategically throughout watershed)*	Sequim Bay – Bimonthly Dungeness - monthly	1.5 FTE (ongoing basis)	Sequim Bay. – Monitoring started in the late 80's and is expected to continue indefinitely. Dungeness – Monitoring started in the 90's and became more intensive and formal over time in response to shellfish bed downgrades by the State Department of Health.
Gaps and outstanding needs	• Comprehensive assessment of stormwater effects on surface waters and groundwater, both in terms of hydrology and possible contaminants. • Comprehensive assessment of land use impacts to surface waters and groundwater. • Monitoring associated with land use decisions (measuring impacts of variances/ exemptions granted for Critical Areas Ordinance and Shoreline Management Plan).				

* Sites are described in detail in the approved QAPP. The Tribe intends to amend the sampling locations as needed to respond to emerging issues, or for other reasons (such as access).

IV. Core and Supplemental Water Quality Indicators

The Tribe's ability to properly assess and address water quality impacts is limited by the disperse nature of its land holdings and the diverse nature of the watersheds in which the holdings occur. Out of necessity the Tribe has vigorously pursued partnerships with other entities who have jurisdiction over lands impacting the quality of waters for which the Tribe has treaty protected rights. These partnerships include local governments, port authorities, State of Washington, US Forest Service, US Fish and Wildlife Service, NOAA Fisheries, Environmental Protection Agency and other Tribes. The US Forest Service has land holding in Tribal watersheds and has been cooperative with the limits of its constrained financial resources. In the table below, are parameters which are monitored for the listed watersheds. Most of these parameters are monitored under the Tribe's leadership in conjunction with partners who assist in the data collection. However, in some instances the Tribe relies upon a partner as the project lead (for example the macroinvertebrate parameter) and the Tribe assists with the site location and/or analysis. The Tribe co-chairs the Clean Water Work Group, a subcommittee of the Dungeness River Management Team, which is responsible for coordinating water quality assessment, improvement and public involvement activities from Sequim Bay to Morse Creek. The Dungeness River Management Team (DRMT) is our local watershed council for eastern WRIA 18 and a portion of WRIA 17. The DRMT has no official decision-making or enforcement authority; all research, restoration, and enforcement authorities remain under the jurisdiction of the various federal, state, local and tribal governments. However, the DRMT and its subcommittees, including the Clean Water Work Group, function as an important ongoing forum for communication, coordination and sharing of resources in the watershed.

Indicator Sampled by Water Resource Type and Program Area									
Water Resource Type and/or CWA Program Area and/or Monitoring Objectives	Dissolved Oxygen	Temperature	pH	Turbidity	Nutrients (TP/ TN)	Habitat	Macro invertebrates	Pathogens	Other
Sequim Bay Watershed	X	X	X	X	X	X	X	X	
Dungeness Watershed	X	X	X	X	X	X	X	X	
Other subbasins (Bagley and Siebert)	X	X	X						

Gaps

- Comprehensive assessment of stormwater on surface waters and groundwater, both in terms of hydrology and possible contaminants.
- Comprehensive assessment of land use impacts to surface waters and groundwater.
- Monitoring associated with land use decisions (measuring impacts of variances/ exemptions granted for Critical Areas Ordinance and Shoreline Management Plan).
- Assessment of smaller subbasins to assure continued water quality. (Hurd Creek, Bear Creek, Canyon Creek, Caraco Creek, Gray Wolf River, Gold Creek, Silver Creek, Gierin Creek)

V. Quality Assurance

Quality Assurance Documents			
Type	Title	Completion Date	EPA Approval
QAPP	Sequim Bay Quality Assurance and Project Plan	2002	2002
QAPP	Quality Assurance Project Plan For Dungeness River / Matriotti Creek Fecal Coliform Bacteria Study	2000	WA Dept. of Ecology
QAPP	Quality Assurance Project Plan for Sequim Bay Water Quality and Blyn Drainages Habitat Assessment Project	2008	
SOP	Ecology, 1992. Field Sampling and Measurement Protocols for the Watershed Assessments Section. Environmental Assessment Program, Washington State Department of Ecology, Olympia, WA.	1992	N/A
SOP	Timber Fish and Wildlife – Ambient Monitoring Program Manual	1993	N/A
SOP	Washington State Cooperative Monitoring, Evaluation, and Research Committee(CMER)-Protocols & Standards Manual	2005/revised in 2017	N/A
SOP	Streamkeepers of Clallam County Grab Sampling Procedures	2000	WA Dept. of Ecology
QAPP	Dungeness Clean Water Strategy Implementation: Task 2 Microbial Source Tracking for WA Department of Ecology Grant #06-00088	2007	WA Dept. of Ecology
QAPP	EPA Targeted Watershed Grants Program: Dungeness River and Estuary for EPA grant #WS -97098101	2005	November 2005
QAPP	Streamkeepers Quality Assurance Project Plan	2000	WA Dept. of Ecology
QAPP	Streamkeepers Quality Assurance Project Plan	2017	WA Dept. of Ecology
QAPP	Monitoring for Harmful Algal Blooms by SoundToxins Partnership	2015	NOAA
QAPP	Jamestown S'Klallam Tribe Addendum to: Quality Assurance Project Plan Monitoring for Harmful Algal Blooms by	2018	2018

VI. Data Management

There are separate databases maintained by the Jamestown S'Klallam Tribe for Dungeness data, Sequim Bay data, and Jimmycomelately restoration monitoring data. Data that the Tribe uses for analysis but is managed by Streamkeepers includes their benthic data and other subbasins' pH, dissolved oxygen and temperature data. Data maintained by the Jamestown S'Klallam Tribe may be entered into Ecology's Environmental Information Management (EIM) system and EPA's STORET system as required. In general, data collection funded by Department of Ecology must be entered into EIM and data collection funded by EPA must be entered into STORET. Further data may be submitted into EIM as this data is utilized by Ecology to determine 303d listing status. Data is backed up regularly and hard copies are stored as permanent records.

Data Management				
Water Resource Type and/or CWA Program Area and/or Monitoring Objectives	**Data Mgmt. – on site**	**STORET**	**Land use data**	**Geo-referencing**
Dungeness	Excel; Access; TWQDB	Segmented PIC data must be entered into STORET by December 2019	Land use data is available through Clallam County Assessor's office. Also, it would be very useful to use aerial images and ground truthing to fully understand Assessor's data.	Yes (GPS coordinates are mapped and stored by Tribe's GIS Specialist)
Sequim Bay	Excel; Access; TWQDB	December 2019	Land use data is available through Clallam County Assessor's office. Also, it would be very useful to use aerial images and ground truthing to fully understand Assessor's data.	Yes (GPS coordinates are mapped and stored by Tribe's GIS Specialist)
Jimmycomelately Creek and restoration monitoring	Access	All water quality data is stored in STORET and the Tribes Water Quality	Fairly comprehensive land use data (determined by aerial photographs and County assessor data layer) is available and managed by Tribe's GIS specialist.	Yes (GPS coordinates are mapped and stored by Tribe's GIS Specialist)Same
Streamkeepers benthic invertebrate data	Data Management by CCSK	N/A	Not available	Yes (GPS coordinates are mapped and stored by Tribe's GIS
Streamkeepers/PIC subbasin pH, dissolved oxygen and temperature	Data Management by CCEH	PIC segmented data is submitted to STORET by the Tribe	Land use data has been incorporated into GIS for subbasins contributing to data collection sites.	All PIC sites are mapped.

*CCSK=Clallam County Streamkeepers and CCEH=Clallam County Environmental Health

VII. Data Analysis/Assessment

The Tribe uses excel to perform trend analyses and geometric mean and 90th percentile statistics for fecal coliform bacteria. Bacterial loading estimates are calculated using instantaneous stream flow x bacteria concentration. Other parameters are compared to State water quality standards, and may be submitted to Department of Ecology's Environmental Information Management (EIM) database for inclusion in the303d listing database. We also use data from Washington Department of Health, Washington Department of Ecology, Clallam County, Clallam Conservation District and Streamkeepers. Tribal reporting includes these data in the yearly Tribal Assessment Report to EPA. Clallam County Environmental Health reports yearly on the PIC Trends data and segmented sampling.

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VIII. Reporting

Tribal Reports			
Report	**Timeframe**	**Entities receiving copies of the report**	**Comments**
Annual Report to Jamestown S'Klallam Tribe Citizens	Annual – usually September of each year	Tribal Council and all Jamestown S'Klallam Tribe Citizens	This report includes a program summary of the water quality and habitat assessments and water quality trends.
Dungeness Watershed: Bacteria Sources as identified by Microbial Source Tracking	Final report -2009	EPA, WA Department of Health, WA Department of Ecology, Clallam County	This report will summarize the microbial source tracking study currently funded by EPA's Targeted Watershed Grant program and Ecology's Centennial Clean Water Fund
Dungeness Watershed: Best Management Practices Effectiveness Study	Final report - 2009	EPA, Clallam County	This report will summarize the bmp effectiveness study currently underway.
State of the Waters of Clallam County	Intended to be updated every 3-5 years. Tribe is a collaborator with Clallam County.	Local governments, WA Department of Health, WA Department of Ecology, EPA	This report summarizes the water quality data available for each basin in Clallam County.
Milestones of Restoration and Conservation Activities in the Dungeness River Management Team Area Geographic Focus	Annual	Local governments, partners in monitoring, conservation and restoration of the Dungeness River Management geographic area.	Compilation of annual achievements and summary of assessments with contact information.

* Jamestown S'Klallam Tribe also writes and submits all reports required by granting agencies and organizations which generally includes quarterly progress reports and a final report.

IX. Programmatic Evaluation

The Jamestown S'Klallam Tribe works internally to assess our monitoring program and identify gaps and needs on an annual basis. This is done among the Natural Resources staff involved in the water quality program. Furthermore we continually work with the Tribal partners working to protect and preserve our Tribal Resources. This partnership includes a collaboration of the Northwest Indian Fisheries Commission, the Point No Point Tribal Treaty Council, and their member tribes. We collaborate with our local partners to discuss trends observed and upcoming work needs and work with neighboring Tribes on our long-term goals. Currently, the Tribe and local partners refer to the Clean Water Work Group and PIC partners, Formal updates and evaluations of water quality status has been presented to the Tribe and all partners by the Clallam County Environmental Health department since the start of the PIC program in 2015.

The Tribe's water quality program has benefitted from both financial and technical assistance from the EPA. We will continue to rely on this assistance. Financial assistance has been through Section 319 and 106 Clean Water Act grant program funds, Wetland planning grant program funds, GAP grant program funds, and a Targeted Watershed Initiative Grant. Technical assistance has been provided through training for STORET, assistance in preparing the Dungeness Bay TMDL, QAPP review, and participation in the Clean Water Work Group.

X. General Support and Infrastructure

	Staffing	Training	Equipment	Lab resources
Natural Resources Program	Senior Natural Resources Technician Natural Resources Technician GIS Specialist Habitat Biologist Habitat Manager Environmental Planning Manager Watershed Planner Shellfish Biologist Restoration Planner	-STORET -Statistics classes -Habitat Assessment protocol training -Flow measure ments -GIS training -USGS TESNAR Workshops (groundwater sampling, flow monitoring and monitoring thermal regimes).	Water quality assessment: (1) SonTec Flowtracker flow meter Quanta Hydrolab (8) Tidbit Temperature gages (5) Hobo Dissolved Oxygen dataloggers and shuttle (1) Refractometer (1) Skiff (16' –available for nearshore work) Habitat assessment: (9) Minnow traps (1) Hip chain (1) Densiometer Range finder/clinometer (1) Stadia rod/ laser level Beach seine net Fish measuring board Waders/hip boots	Bacteria samples are analyzed by: Clallam County Environmental Health Laboratory TWISS Analytical Laboratory Nutrients are analyzed by: University of Washington Metals and Inorganics are analyzed by: TWISS Analytical Laboratory

	Need to maintain staff involved in water quality and habitat program, and to hire consultants for additional expertise as required.	-	Updated computer equipment.	

Attachment 1: 303d listing for Dungeness Watershed

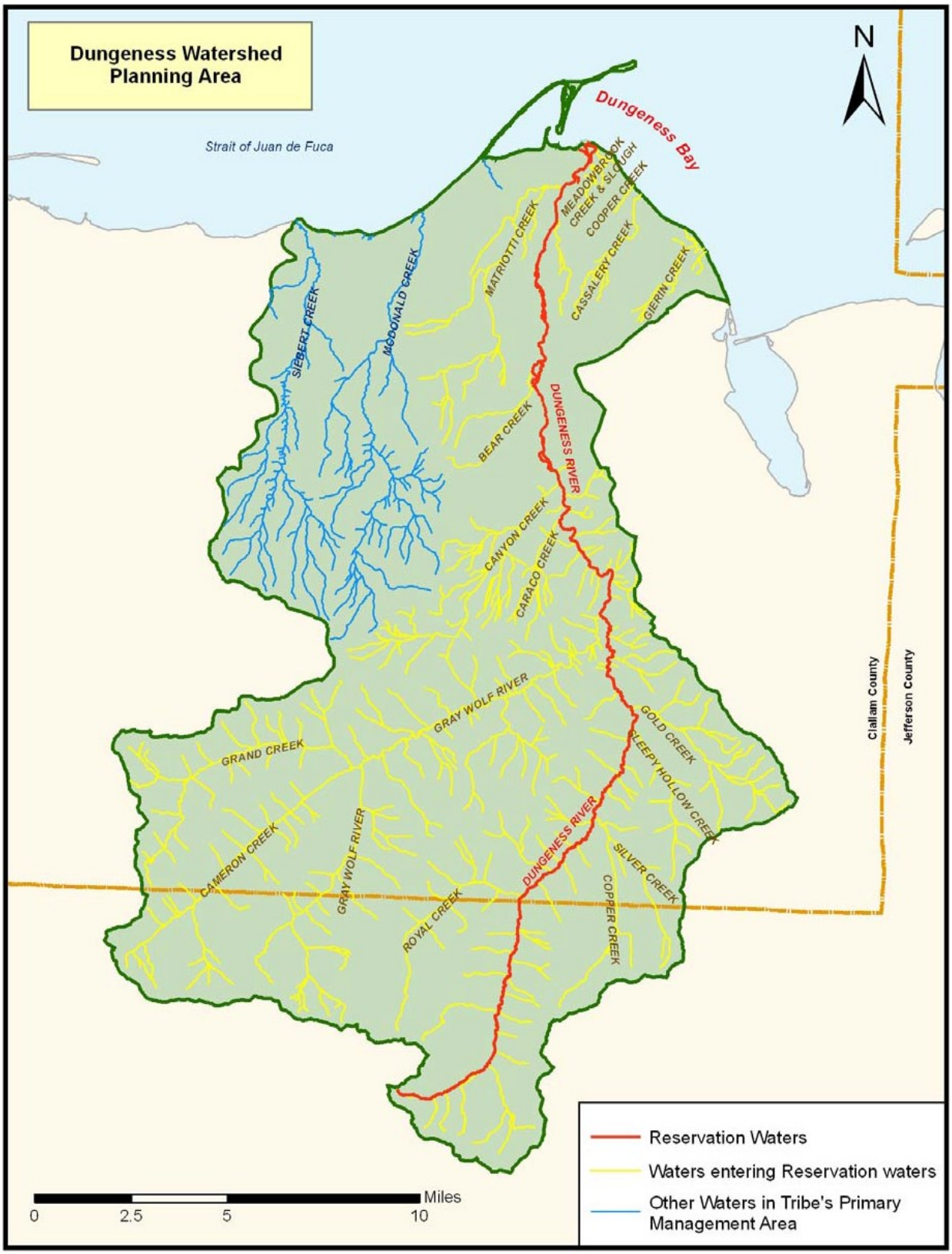
Summary of Washington State's Water Quality Assessment [303(d)] List for the Dungeness Watershed Area (Categories 2-5) (from WA Dept. of Ecology website, 20012)			
Water Body Name	**Pollution Parameter**	**Category**	**Listing Description**
Freshwater Bodies			
Cassalery Creek	Dissolved Oxygen	5	SK data 2000-2001
	Bacteria	5	CC data, 1991; SK data 2000-2010
	Turbidity	5	SK data 1999-2017
Siebert Creek (west fork)	Dissolved Oxygen	5	SK 2001-2010
Siebert Creek	Bacteria	2	SK 1999-2010
	Temperature	5	Continuous Stream Monitoring 2001-
Matriotti Creek	Bacteria	4A	CC, JST, Ecology data 1991-2002
	PH	2	TMDL 1999-2000
	Dissolved Oxygen	5	TMDL 1999-2000
Meadowbrook Creek	Bacteria	4A	CC, JST, Ecology data 1991-2002
	pH	2	TMDL 1999-2000, CC2004-2008
	Temperature	5	TMDL 1999-2000, CC2004-2008
	Dissolved Oxygen	5	TMDL 1999-2000, CC2004-2008
Meadowbrook Slough	Dissolved Oxygen	5	Dungeness/Matriotti TMDL 1999-2000
	Bacteria	4A	TMDL 1999-2000, CC, JST 2000-2010
	PH	5	TMDL 1999-2000
Dungeness River	Mercury	2	Ecology single sample 2003
	Thallium	2	EPA station at Sequim water intake, single sample.
	Temperature	5, 2	CC 2005-2008, TMDL Effectiveness
	Dissolved Oxygen	5	CC 2005-2008, TMDL Effectiveness
Dungeness River	Mercury	2	Ecology single sample 2003
	Thallium	2	EPA station at Sequim water intake, single sample.
Marine Water Bodies			
Dungeness Bay	Bacteria	5, 2	JST, Ecology data 1999-2002
	Fish Habitat	4C	WDFW 2000-2001 ulvoid macroalgae impairment to shellfish and surf smelt spawning
Strait of Juan de Fuca (East)	Bacteria	5	WA Dept. of Health, 2001

303(d) list categories: Category 5= Polluted waters that require a TMDL; Category 4a= Polluted water bodies that have a TMDL; Category 4C=Water bodies impaired by a non-pollutant; Category 2=Waters of concern; Category 1=Meets standards

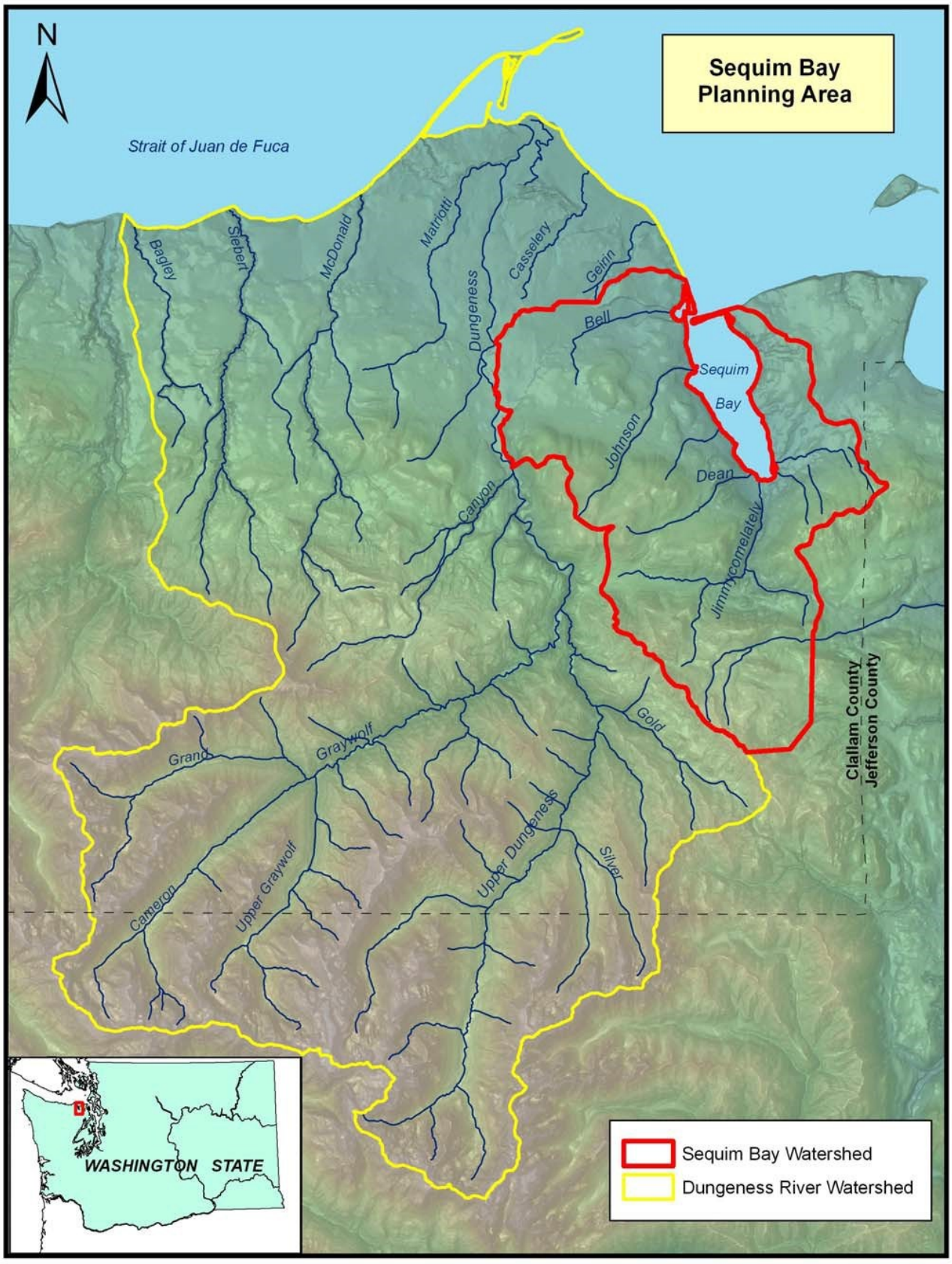
SK=Streamkeepers; CC=Clallam County; JST=Jamestown S'Klallam Tribe; Ecology=WA Dept. of Ecology

[1] Study found biological degradation of aquatic life based on River Invertebrate Predication and Classification System. Insufficient evidence to show impairment due to pollutant.

Attachment 2: Dungeness Watershed



Attachment 3: Sequim Bay Watershed



Jamestown S'Klallam Tribe

Inadvertent Discovery Plan

Tribal Historic Preservation Office
1033 Old Blyn Hwy
Sequim, WA 98382

October, 2018

Introduction

The following Inadvertent Discovery Plan (IDP) outlines procedures to follow in accordance with state and federal laws, if archaeological materials or human remains are discovered. In the event that any ground-disturbing activities or other project activities related to this development or in any future development uncover protected cultural material (e.g., bones, shell, antler, horn or stone tools), all work should cease immediately and refer to this IDP for appropriate procedures and contacts. If you have any questions or concerns regarding the IDP please contact Jamestown S'Klallam Tribe's Tribal Historic Preservation Officer (THPO) David Brownell at (360) 681-4638 or dbrownell@jamestowntribe.org for additional information.

Recognizing Cultural Resources

A cultural resource discovery could be prehistoric or historic. Examples include:

1. An accumulation of shell, burned rocks, or other food related materials,
2. Bones or small pieces of bone,
3. An area of charcoal or very dark stained soil with artifacts,
4. Stone tools or waste flakes (i.e. an arrowhead, or stone chips),
5. Clusters of tin cans or bottles, logging or agricultural equipment that appears to be older than 50 years,
6. Buried railroad tracks, decking, or other industrial materials,
7. When in doubt, assume the material is a cultural resource.

On-Site Responsibilities

1. **STEP 1: STOP WORK.** If anyone, including the contractor or subcontractor believes that he or she has uncovered a cultural resource at any point in the project, all work adjacent to the discovery must stop. The discovery location should be secured at all times.
2. **STEP 2: NOTIFY MONITOR.** If there is an archaeological monitor for the project, notify that person. If there is a monitoring plan in place, the monitor will follow its provisions.
3. **STEP 3: NOTIFY APPLICABLE CONTACTS:**
   If the discovery **is human remains**, the property owner or contractor will stop work in and adjacent to the discovery, completely secure the work area by moving the land-altering equipment to a reasonable distance, and will immediately contact:
   a. **Tribal Historic Preservation Officer** David Brownell (360) 461-8191
   b. The **Clallam County Sherriff (306) 417-2262** and;
   c. Either the Clallam Co. Sherriff or the Cultural Resources Specialist will contact the **Clallam County Prosecutor's Office** (**County Coroner**) (360) 417-2301; and
   d. If the remains are not forensic in nature (meaning they not modern/recent remains) the **Department of Archaeology and Historic Preservation (DAHP) Physical Anthropologist** Guy Tasa (360) 586-3534; will take the lead on determining the appropriate method of treatment for the remains and will consult with the affected tribes.

If human remains are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. **Do not call or speak with the media** about the remains specifically.

If the discovery is **not human remains** and when an unanticipated discovery of protected cultural material (see definitions below) occurs, the property owner or contractor will completely secure the location and contact:

a. Jamestown S'Klallam THPO - David Brownell, (360) 681-4638;
b. Jamestown S'Klallam Tribe Chief Operations Officer – Jessica Payne, (360) 681-4657;
c. **If the discovery is not on tribal lands** - Department of Archaeology and Historic Preservation (DAHP) -Rob Whitlam, State Archeologist, (360) 586-3080

Cultural Material Protected by Law

Cultural material that may be protected by law could include but is not limited to:

1. Buried layers of black soil with layers of shell, charcoal, and fish and mammal bones;
2. Non-natural sediment or stone deposits that may be related to activity areas of people;
3. Stone, bone, shell, horn, or antler tools that may include projectile points (arrowheads), scrapers, cutting tools, wood working wedges or axes, and grinding stones;
4. Stone tools or stone flakes;
5. Buried cobbles that may indicate a hearth feature;
6. Old ceramic pieces, metal pieces, tools and bottles; and
7. Perennially damp areas may have preservation conditions that allow for remnants of wood and other plant fibers; in these locations there may be remains including:
    a. Fragments of basketry
    b. Weaving
    c. Wood tools
    d. Carved pieces
    e. Human remains

Documentation of Archaeological Materials

Archaeological deposits discovered during construction will be assumed eligible for inclusion in the National Register of Historic Places under Criterion D until a formal Determination of Eligibility is made. The THPO will ensure the proper documentation and assessment of any discovered cultural resources in cooperation with the federal agencies (if any), BIA, affected tribes, and a contracted consultant (if any). The THPO may consult with the Jamestown Tribe's Chief Operations Officer if they anticipate the need to contract a cultural resources management firm to conduct fieldwork and site assessments.

All prehistoric and historic cultural material discovered during project construction will be recorded by the THPO or a professional archaeologist[1] on the cultural resource site or isolate form using standard techniques. Site overviews, features, and artifacts will be photographed; stratigraphic profiles and soil/sediment descriptions will be prepared for subsurface exposures. Discovery locations will be documented on scaled site plans and site location maps.

Cultural features, horizons and artifacts detected in buried sediments may require further evaluation using hand-dug test units. Units may be dug in controlled fashion to expose features, collect samples from undisturbed contexts, or interpret complex stratigraphy. A test excavation unit or small trench might also be used to determine if an intact occupation surface is present. Test units will be used only when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. Excavations will be conducted using state-of-the-art techniques for controlling provenience.

Spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock will be recorded for each probe on a standard form. Test excavation units will be recorded on unit-level forms, which include plan maps for each excavated level, and material type, number, and vertical provenience (depth below surface and stratum association where applicable) for all artifacts recovered from the level. A stratigraphic profile will be drawn for at least one wall of each test excavation unit.

Sediments excavated for purposes of cultural resources investigation will be screened through 1/8-inch mesh, unless soil conditions warrant ¼-inch mesh.

All prehistoric and historic artifacts collected from the surface and from probes and excavation units will be analyzed, catalogued, and temporarily curated. Ultimate disposition of cultural materials will be determined in consultation with the federal agencies (if any), DAHP, and the Jamestown S'Klallam Tribe.

Within 90 days of concluding fieldwork, a technical report describing any and all monitoring and resultant archaeological excavations will be provided to the THPO, who will forward the report to the Chief Operations Officer (or approved designee) for review the federal agencies (if any), SHPO, and the Port Gamble S'Klallam and Lower Elwha Klallam Tribes.

If assessment activity exposes human remains (burials, isolated teeth, or bones), the process described above in "On-Site Responsibilities" will be followed.

Proceeding with Construction

Project construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. A professional archaeologist must determine the boundaries of the discovery location. In consultation with any effected parties, the THPO will determine the appropriate level of documentation and treatment of the resource. If there is a federal nexus, Section 106 consultation and associated federal laws will make the final determinations about treatment and documentation.

[1] A professional archaeologist meeting the standards and guidelines of the Secretary of the Interior as published in 36 CFR Part 61

Upon delineation of the site, the **THPO will consult with the Tribal Chief Operations Officer, Planning Director, and other designated parties to determine possible options for avoiding any impacts to the site and allowing the materials to remain in situ**. If it is determined to be impossible to avoid adverse impacts to the site using reasonable means, then the THPO will be responsible for:

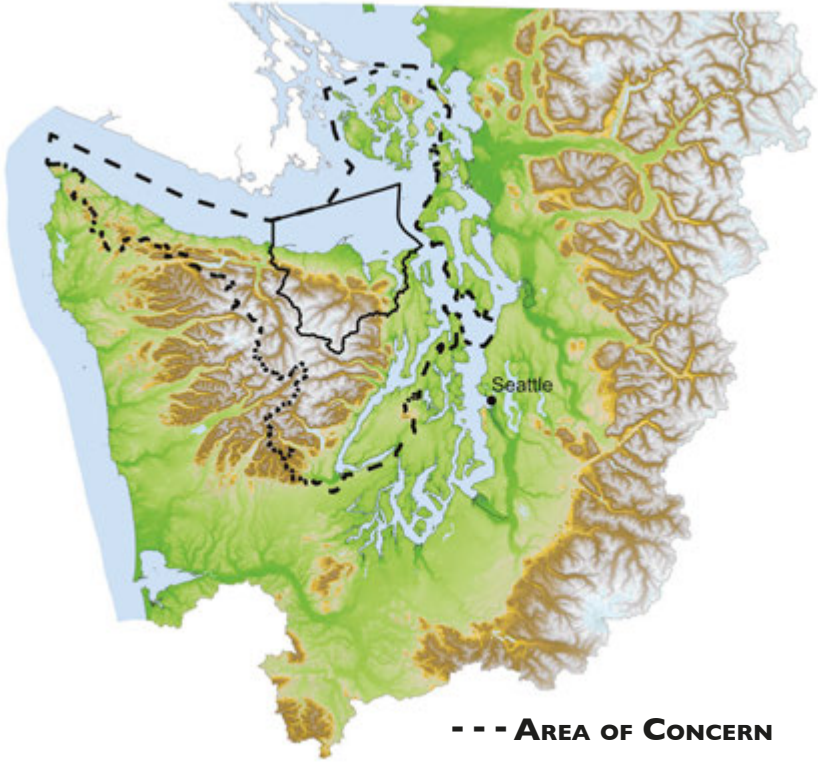
a. Securing an ARPA permit through the Bureau of Indian Affairs Archaeologist under 43CFR7 and
b. Consulting with the BIA to determine any mitigation measures and stipulations to be incorporated into the terms and conditions of the permit.

COMPLIANCE WITH ALL APPLICABLE LAWS PERTAINING TO ARCHAEOLOGICAL RESOURCES (43CFR7, RCW 27.53, 27.44 and WAC 25-48) AND WITH HUMAN REMAINS (NAGPRA and RCW 68.50) IS REQUIRED. FAILURE TO COMPLY WITH THESE REQUIREMENTS COULD RESULT IN A MISDEMEANOR AND POSSIBLE CIVIL PENALTIES AND/OR CONSTITUTE A CLASS C FELONY.

2020 State of Our Watersheds Report
Dungeness – Morse Watersheds

Are we worried and disappointed about climate change, water resources and the state of salmon habitat? Yes, we are, but we refuse to be discouraged. We'll keep at it because salmon will always be who we are.

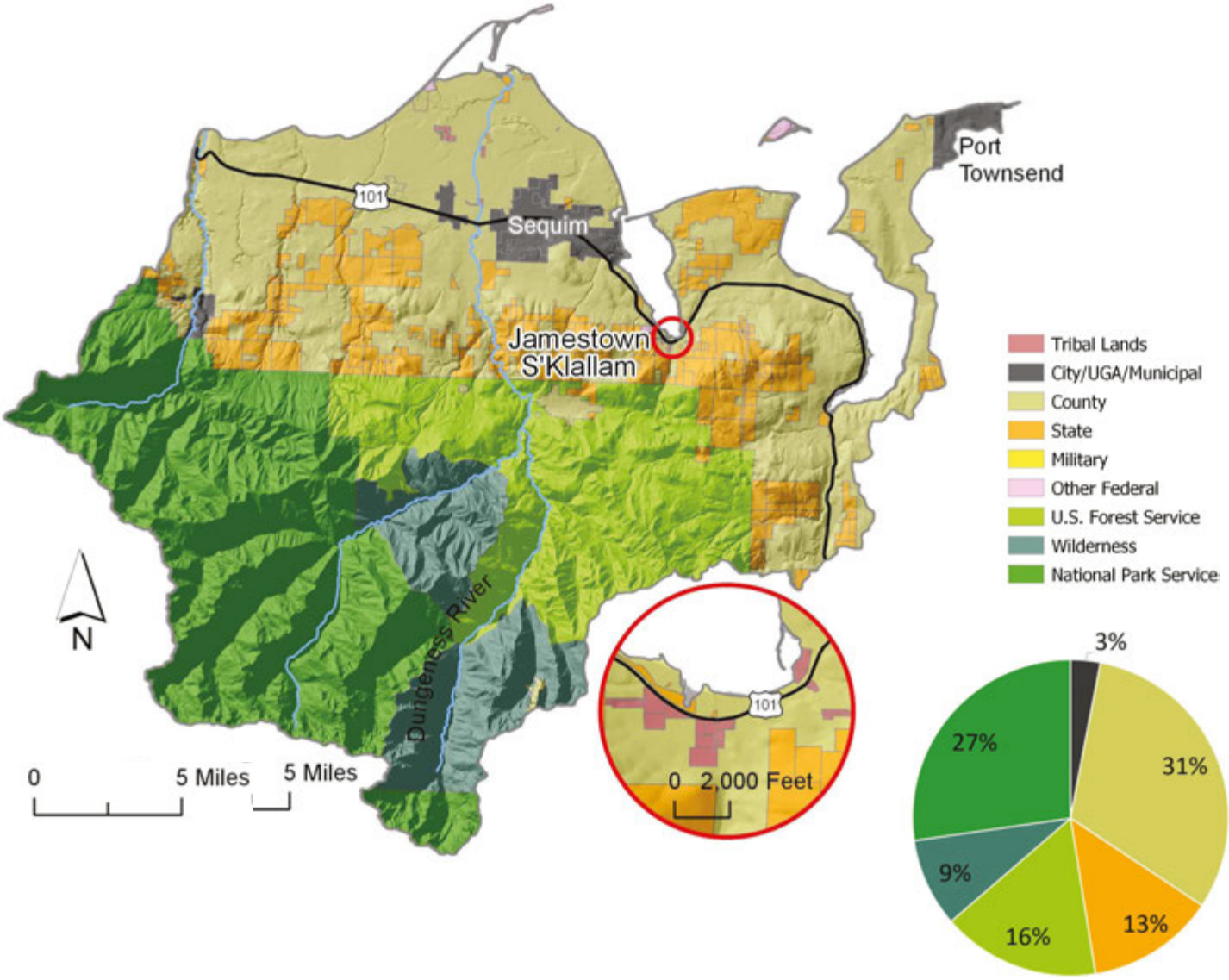
– W. Ron Allen
Chairman



Jamestown S'Klallam Tribe

The Jamestown S'Klallam people have been living in these areas since time immemorial in winter and summer communities along or near the shore of the Strait of Juan de Fuca and Hood Canal. As part of their way of life, the Jamestown S'Klallam people have fished and hunted in these areas for cultural, spiritual and economic reasons, and continue to do so today. These watersheds and coastal areas have been impacted by commercial forestry, agriculture, rural and urban development, which impacts important habitat for salmonids and steelhead, among other species. Development in the floodplain also has altered the hydrologic conditions of the floodplain to the detriment of salmonid production. The Jamestown S'Klallam are working hard toward recovery in this region since it is so critical.

Jamestown S'Klallam Tribe



The Jamestown S'Klallam Tribe's area of primary interest for this report is in the northeast corner of the Olympic Peninsula, including portions of the Quilcene-Snow and Dungeness-Elwha drainage areas, which reside in the rain shadow of the Olympic Mountains. These watersheds include the Dungeness River, whose headwaters are located in the Olympic National Park and U.S. Forest Service wilderness areas, plus other smaller independent drainages, all emptying into the Strait of Juan de Fuca.

The S'Klallam were the first human inhabitants in the eastern Strait region where they had villages and fishing camps along the shorelines and near the mouths of major streams, enjoying the benefits of the plentiful fish and shellfish resources.

With the signing of the Point No Point Treaty of 1855, the S'Klallam tribes retained the right to fish, hunt and gather in their Usual and Accustomed areas. These treaty-reserved rights were affirmed by Judge Boldt in the *U.S. v. Washington* ruling (the Boldt decision), in the 1994 ruling by Judge Rafeedie affirming tribal shellfish harvest, and several other court cases.

However, by 1855, Euro-Americans had begun settlements around sawmills in the region, logging old-growth timber that dominated the landscape and farming the lower Dungeness River floodplains.

Today, a plethora of human impacts have degraded Dungeness River salmon habitat, as well as habitat of other independent tributaries to the Strait and the accompanying nearshore environment.

These impacts include agricultural water withdrawals, shoreline bank armoring, riparian clearing and sediment impacts, and contribute greatly to the decline of Dungeness salmon and char.

While the tribe and other stakeholders are making significant gains in restoring our focus area of habitat, one of the direst impacts – the loss of floodplains – has mostly eluded correction. The tribe remains committed to salmon recovery, but has been increasingly reliant on shellfish harvests.

Map Data Sources: USFWS 2014,[3] WAECY 2011,[4] WAECY 2018,[5] WAECY 1994,[6] WADNR 2018,[7,8,9] WADOT 2018,[10]

Chapter Summary

The Jamestown S'Klallam Tribe has fished, hunted and gathered in their watersheds in western Washington since time immemorial and are leaders in the state's salmon recovery effort, especially in the Olympic Peninsula and Hood Canal regions. The S'Klallams, among other tribes, have taken a large role not only culturally, but also scientifically to understand these watersheds because of their significance to their people and their children's future. The tribe believes if salmon and shellfish are to survive, real gains in habitat protection and restoration must be achieved.

The primary limiting factors to salmon recovery are the quantity and quality of habitat in the watersheds where salmon begin and end their lives. The treaty tribes believe the salmon recovery effort should focus on this.

The 2020 State of Our Watersheds Report examines key indicators of habitat quality and quantity across the watersheds in the tribe's Usual and Accustomed fishing areas as defined by *U.S. v. Washington* (the Boldt decision). The 1974 ruling upheld tribal treaty-reserved rights, including the right to half of the harvestable salmon returning to Washington waters every year and established the tribes as co-managers of the salmon resource. The goal of this report is to provide tribes with a basic assessment of the health of their watersheds and to gauge progress toward salmon recovery. This report is part of the Treaty Rights at Risk initiative begun collectively by the tribes in 2011 as a call to action for the federal government to exercise its trust responsibility to the tribes and lead a more coordinated and effective salmon recovery effort. More information is available at *www.treatyrightsatrisk.org*.

For this report, the Jamestown S'Klallam Tribe has focused on portions of their watersheds that are of greatest concern because of habitat loss, degradation and water quality. This document is considered a living document that will be updated as new data become available, providing both a metric for assessing changes in salmon habitat and a method for monitoring those changes. The report also will be used to quantify the progress made with the region's salmon recovery plans.

Principal Findings

Nearshore Habitat Loss Continues due to Shoreline Armoring

Since the 2016 State of Our Watersheds Report, an additional 1.5 miles of armored shoreline has been identified in the tribe's Area of Interest. Docks, bulkheads, riprap and other forms of shoreline armoring severely affect the fish and other wildlife that depend on these areas for nursery, habitat and breeding grounds. With increasing populations, shoreline armoring is likely to increase as well. However, the tribe is working to preserve and protect the nearshore environment from developments that would armor it.

Forage Fish Habitat is on a Decreasing Trend

Sand lance, surf smelt, and Pacific herring are essential for the survival of many species in the sound including ESA-listed salmon stocks. The spawning grounds for these forage fish continues to dwindle due to shoreline armoring. Currently, 19.1% of their preferred spawning grounds are armored. This is a 5% increase relative to the total shoreline analyzed since the 2016 State of Our Watersheds Report.

Forest Cover Increases

Forest cover in the Area of Interest increased by 4.7 square miles since the 2016 State of Our Watersheds Report. Much of the area analyzed borders national park and wilderness land. Nearly 60 sub-watersheds in the area have moderate, poor or severely damaged forest cover. Clearcutting and land conversion to developed areas impairs the natural function of connected, healthy forests.

Impervious Surface Increases Slow

Within the tribe's Area of Interest, impervious surfaces have increased by only 0.23% since the 2016 State of Our Watersheds Report. Of the 104 sub-watersheds, 13 have degrading watershed health (12-40% impervious surface area).

Climate Change Models Predict Rising Seas

With sea level rise predictions ranging from 0.9 to 5.1 feet by the end of the century, the Jamestown S'Klallam are preparing for change. Climate change could negatively affect the tribe's resources, economy, infrastructure and health. The Jamestown Climate Vulnerability Assessment and Adaptation Plan analyzes the potential impacts of climate change and outlines measures that the tribe will implement to mitigate these impacts.

Dungeness Floodplain Restoration Continues

Before 1963, the Lower Dungeness floodplain was over 700 acres but in 2019, only 169 acres remain intact. Massive river dikes block the natural flow and processes of the river. The Jamestown S'Klallam Tribe has been working for more than 30 years to restore the floodplain. A properly functioning floodplain is essential for salmon habitat.

Biotoxins Remain Persistent in Sequim Bay

Harmful algal blooms make shellfish toxic for consumption. The tribe monitors these blooms and issues harvest closures when toxicity thresholds are exceeded. Long-term data collection will help to identify what causes these blooms. The tribe will conduct a pilot study in 2021 that adds phytoplankton and nutrient sampling to already existing WDFW zooplankton monitoring programs.

Conclusion

The biggest of success (and on-going need) is in the Dungeness River watershed and estuary. The tribe has been instrumental in coordinating with partners and restoring much of the area in and along the river and estuary. However, more work needs to be done so that the salmon and other critical fish and wildlife can return. Lack of funding and community education continues to hinder progress. Nearshore and riparian restoration has been implemented and been successful, and should be used as a model for other areas in the watershed. At the same time, the incremental decline in habitat conditions across the watershed in their Area of Interest has continued. Too much nearshore habitat remains armored, impervious surfaces continue to expand as populations increase, habitat conditions for forage fish and herring continue to decline, and harmful algal blooms are making shellfish toxic for consumption. Restoration is not enough to keep up with the impacts of a growing population and their land use in the watershed. People have to be held accountable to protecting, conserving and improving fish habitat in their land use decisions, and federal, state and local gov-

ernments all have a role in that and are encouraged to work with the tribe. Land use and water laws that are in place and meant to protect critical areas and fish habitat need to be implemented. Implementation includes education and voluntary action, but it also needs to include enforcement when those laws are broken. The future of tribal treaty rights in this area depends on it. The tribe is working toward climate resilience, through monitoring and evaluation of impacts to their tribally owned land and the surrounding areas where they hunt and fish.

Key Indicators All Show Declining Habitat Conditions

At the 15-year mark of the Puget Sound Salmon Recovery Plan, a review of key environmental indicators for the Dungeness basin planning area shows that priority issues continue to be degradation of water quantity and quality, degradation of floodplain and riparian processes, and degradation of marine shoreline habitat conditions. In addition, there is a shortage of staff at all levels (e.g., federal, state, tribal and county) needed to address the issues and implement actions to restore and protect habitat and to monitor and enforce compliance of existing regulations. Funding shortfalls for large-scale projects (e.g., Siebert Creek culvert replacement, Dungeness River floodplain restoration) contribute to the slow pace of progress.

Review of the status of these key environmental indicators since the 2016 State of Our Watersheds Report shows a steady loss in habitat status:

Tribal Indicator	Status	Trend Since SOW 2016 Report
Shoreline Modifications/Forage Fish Impacts	Since reported in 2016, the amount of armored marine shoreline has increased by 2% relative to the total coastal shoreline analyzed (501,500 feet). Since that time the total length of armored shoreline has increased by an additional 8,698 feet.	**Declining**
Forage Fish	Since reported in 2016, shoreline armoring within documented sand lance, surf smelt, and Pacific herring habitats has increased by 5% relative to the total shoreline analyzed (260,720 feet). The total length of affected habitat along this shoreline has increased to 8,140 feet.	**Declining**
Forestland Cover	Forest cover increased by 4.7 square miles from 2011-2016. However, of the 104 sub-watersheds in this area, those with moderate, poor, or severely damaged forest cover increased from 55 sub-watersheds in 2011 to 56 sub-watersheds in 2016. Thirty-seven sub-watersheds had an overall loss of forest cover from 2011 to 2016.	**Declining**
Impervious Surface	With the exception of northern part of the Jamestown Tribe's Focus Area, many of the watersheds show little increase in impervious surface area from 2011 to 2016. However, the total impervious surface area has increased by 0.23% across their area. Four of the 113 sub-watersheds have a 1% to 4% increase in impervious surface area. Thirteen sub-watersheds have degrading watershed health (12-40% impervious surface area).	**Declining**
Climate Change	The 2013 Jamestown Climate Vulnerability Assessment and Adaptation Plan provides an assessment of vulnerabilities of tribal resources to the negative impacts of climate change. The plan also identifies adaptation measures and the tribe is working to complete these measures. Sea level rise, ocean acidification and climate models show potential for increased risks to critical habitats, tribal infrastructure and tribal health.	**Concern**

The tribe continues to work toward the protection and restoration of healthy and functional nearshore, estuarine and river habitat, restoring those areas that are degraded, and conducting research to understand the organisms and the habitats they occupy.

Looking Ahead

As the Jamestown S'Klallam Tribe looks ahead, the issues and indicators discussed in this report will remain as priorities needing attention and monitoring. The tribe continues to prioritize Dungeness River floodplain recovery. Other important work remains, including reducing armor along all marine shorelines to improve herring and forage fish spawning habitat, and juvenile salmon migration habitat. Other priority issues include the decrease in forest cover and the increase of impervious surface in important habitat areas.

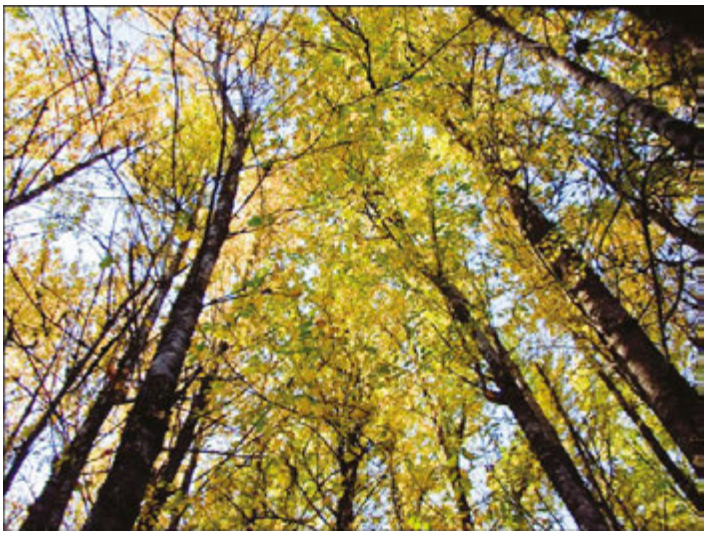
The tribe is on the forefront of addressing tribal vulnerabilities and initiating preparation for climate change. As one of the first tribes in western Washington to complete a climate adaptation plan and vulnerability assessment, they have identified and prioritized areas where the changing climate conditions (i.e., changing precipitation patterns, sea level rise, ocean acidification) will leave their resources, infrastructure, economy and health most vulnerable.[1] Sea level rise models designed for their Area of Interest show potential damage and vulnerability to critical beaches, tribal infrastructure, main roads and emergency services. Additional impacts to the tribe include increased occurrence of shellfish poisoning associated with harmful algal blooms (which warmer conditions may favor) and potentially diminished health and wellness of tribal members.

One of the main problems in the Dungeness watershed, both for fish and humans, is low streamflows, especially in late summer when the highest demand for irrigation water coincides with peak chinook spawning.

The tribe has worked for many years with the irrigation community, as well as the Clallam Conservation District and Washington Department of Ecology, to reduce the impacts of irrigation by implementation of water conservation projects and other improved irrigation system efficiencies. Over the past 15 years, the irrigators have reduced their withdrawal by over 45% with the development and implementation of the Water Conservation Plan.[2] Progress has been made, but Dungeness flows are still inadequate for sustaining ESA-listed salmon species.

Currently an agreement between the Water Users Association and Washington Department of Ecology (September 2012) details allowed water uses and mitigation activity for irrigation. The agreement binds the irrigators to withdraw no more than 50% of the river flow, while always leaving at least 60 cubic feet per second (cfs), and to reduce their adjudicated certificates to 93.5 cfs. Urban and residential growth in the watershed relies almost entirely on groundwater sources that are hydraulically linked with the Dungeness River. The tribe is hopeful that the irrigators and community will continue to prioritize water conservation and develop additional solutions, such as the Dungeness off-channel reservoir.

In spite of outward appearances, the Sequim/Dungeness watershed is still degraded. Hydrological modifications of the Dungeness River, including a 3-mile-long Army Corps of Engineers levee and five private levees, have caused such significant aggradation in the lower river that flooding is a constant threat.



PNPTC

Forest cover at Fort Warden State Park

The tribe is hoping to continue to obtain funding to include floodplain restoration. Funding from the Puget Sound Acquisition and Restoration Fund and the Floodplains by Design initiative has been allocated for restoration efforts in the lower Dungeness River floodplain to restore and improve nearshore, estuary and floodplain conditions while reducing downstream flood risk. The project funded in 2015 includes plans for levee setbacks and habitat restoration to reconnect 112 acres of floodplain that is expected to be completed within the next five years. The tribe will continue to lead efforts to plan and implement additional habitat restoration on the river.

Within the past 10 years, there has been a proliferation of commercial development and associated increase of impervious surfaces, leading to greater amounts of stormwater runoff. Stormwater runoff impacts fresh and marine waters and is a contributing factor to shellfish harvest area downgrades and salmon fatalities in local streams. Shellfish beds in both Dungeness and Sequim bays are subject to harvest closures due to either bacterial pollution or toxins associated with algal blooms. Except for the city of Sequim, the entire watershed is served by individual or community septic systems, many of which are likely contributors to marine bacterial pollution.[3] The tribe will continue to monitor and address impacts to water quality and shellfish.

Habitat is declining despite the assessment of the Puget Sound Chinook Recovery Plan that protecting existing habitat is the most important action needed.[4] Conditions in the Dungeness River floodplain that are harmful to both fish and humans have been described in the Dungeness Flood Control Plan (1990), Dungeness Comprehensive Flood Hazard Management Plan (2009) and several salmon recovery documents. A focused message is needed to foster community will and political support to protect remaining high-quality habitat.

Nearshore Habitat Loss in the Strait of Juan de Fuca from Morse Creek to Port Townsend

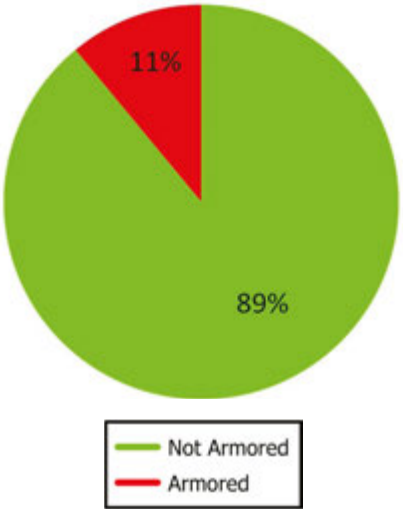
Since reported in 2016[1], the amount of armored marine shoreline has increased by 2% relative to the total coastal shoreline analyzed (501,500 feet). Since that time, the total length of armored shoreline has increased by an additional 8,698 feet within the tribe's Area of Interest. Armored shorelines diminish healthy habitats for fish and shellfish.

A. Natural Shoreline

B. Armored Shoreline

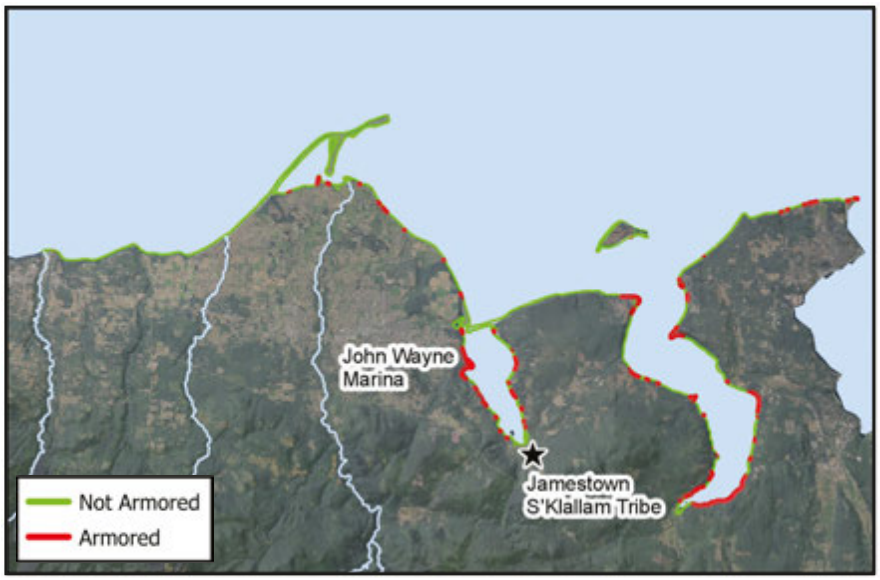
Washington Department of Ecology Coastal Atlas, 2006 (2)

Figure 1: Shoreline Conditions 2017



As of 2017, data collected on shoreline conditions in this Area of Interest (AOI) shows that 11% is armored and 89% is not armored (Figure 1). New shoreline armoring was permitted in Jamestown's AOI from 2016 through 2018 (Figure 2).

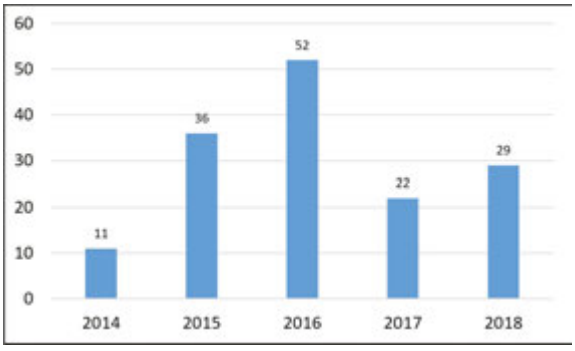
Marine Shoreline Conditions



The Strait of Juan de Fuca contains a rich array of marine habitats that support diverse populations of fish, marine mammals and other wildlife. The impacts of bulkheads, docks and other forms of armoring can reduce or eliminate productive beaches and shallow water habitats through filling or by alteration of sediment sources or sediment transport along the nearshore.[2] Furthermore, shoreline armoring associated with a single-family residence, which is exempt under local shoreline master plans, has substantially increased.[3] However, the nearshore coastline adjacent to the Jamestown S'Klallam reservation is largely forested and undeveloped, which is notable compared to the area near the northwestern shore of Sequim Bay (Photo B). This area by Washington Harbor has had a long history of occupancy by the tribe up until the time of non-Indian settlement.[4]

Today habitat function has been lost as a marina, dock, fill, parking lot and launch ramp have severely impacted the shoreline natural processes.[5] Shoreline alterations such as jetties and rock walls disrupt the flow of sediment on beaches. Docks and bulkheads cover beaches and reduce the productivity of plants and fish in these areas.[6] The tribe relies on these healthy habitats to sustain their way of life, including fishing and shellfishing, and the tribe is working toward preserving and restoring habitat in this region. Habitat alteration has been identified in the Action Agenda[7] as a threat and a priority for action in the Puget Sound and Strait of Juan de Fuca.

Figure 2: HPA Permits Issued by Year in Jamestown AOI



Map Data Sources: SSHIAP 2004,[8] SSHIAP 2012,[9] NAIP,[10] CGS 2017[11]

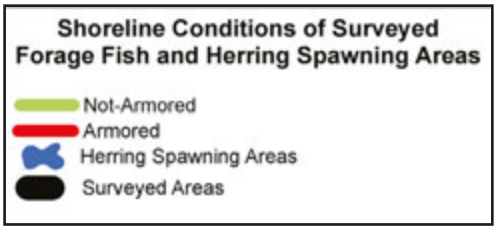
Spawning Conditions for Sand Lance, Surf Smelt and Herring Are Threatened

Since reported in 2016, shoreline armoring within documented sand lance, surf smelt and Pacific herring habitats has increased by 5% relative to the total shoreline analyzed (260,720 feet). The total length of affected habitat along this shoreline has increased to 8,140 feet. Shoreline armoring interrupts the movement of sediment and negatively affects spawning habitat. Herring stocks remain in critical status in Discovery Bay.

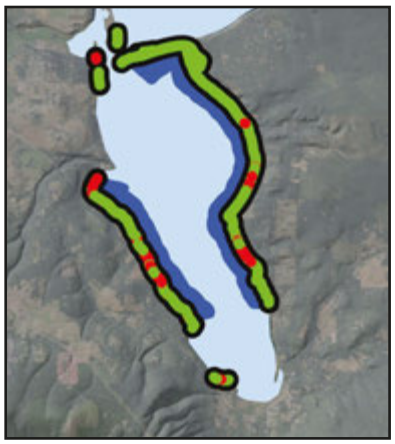
Forage fishes, such as sand lance and surf smelt, spawn on upper intertidal beaches made of sand and gravel. These fish are small schooling fishes that are important prey for larger predatory fish and wildlife in the marine food web.[1] Sand lance is recognized as being one of the key elements of a juvenile chinook's nearshore diet.[2]

In the Strait of Juan de Fuca, bays have been altered in various ways by human activities, to the detriment of these species. Studies show that development on shorelines negatively affects their spawning sites.[3] This could be one of the main factors contributing to their continued decline.

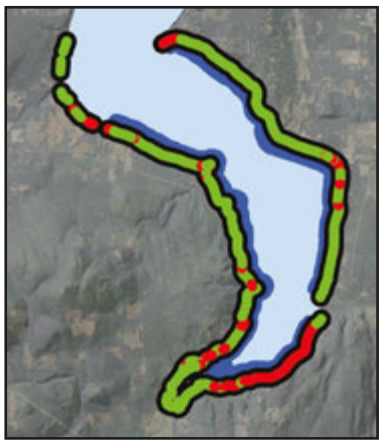
Maintaining abundant herring, surf smelt and sand lance in Puget Sound is a conservation imperative, but current county regulations do not consider cumulative or off-site impacts of shoreline armoring and do not address likely future conditions such as climate change.[4,5]



Sequim Bay Habitat Conditions



Discovery Bay Habitat Conditions



Dungeness Bay Habitat Conditions

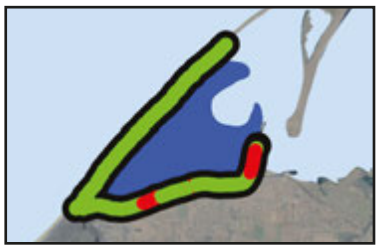
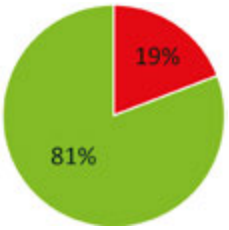


Figure 1: Forage Fish Habitat Shoreline Conditions



The shoreline conditions in known forage fish spawning areas by percentage. Not all shorelines have been surveyed.

Pacific herring are a valuable indicator of ecosystem health and they serve as important bait fish for tribal fishermen. In Discovery Bay, Pacific herring status is critical (Figure 2), which is one step away from disappearance. In Sequim Bay, the status in recent years has fluctuated between declining and critical. The estimated herring biomass in Discovery Bay and Sequim Bay combined continues to be low compared to the 1980s.[6]

Figure 2: WDFW Herring Status[7]

Year	Discovery Bay	Dungeness/Sequim Bay
1988	Unknown	Unknown
1992	Declining	Unknown
1996	Depressed	Unknown
2000	Critical	Increasing
2004	Critical	Declining
2008	Depressed	Critical
2012	Critical	Declining
2016	Critical	Declining

Map Data Sources: NAIP,[9] SSHIAP,[10] WDFW[10,11]

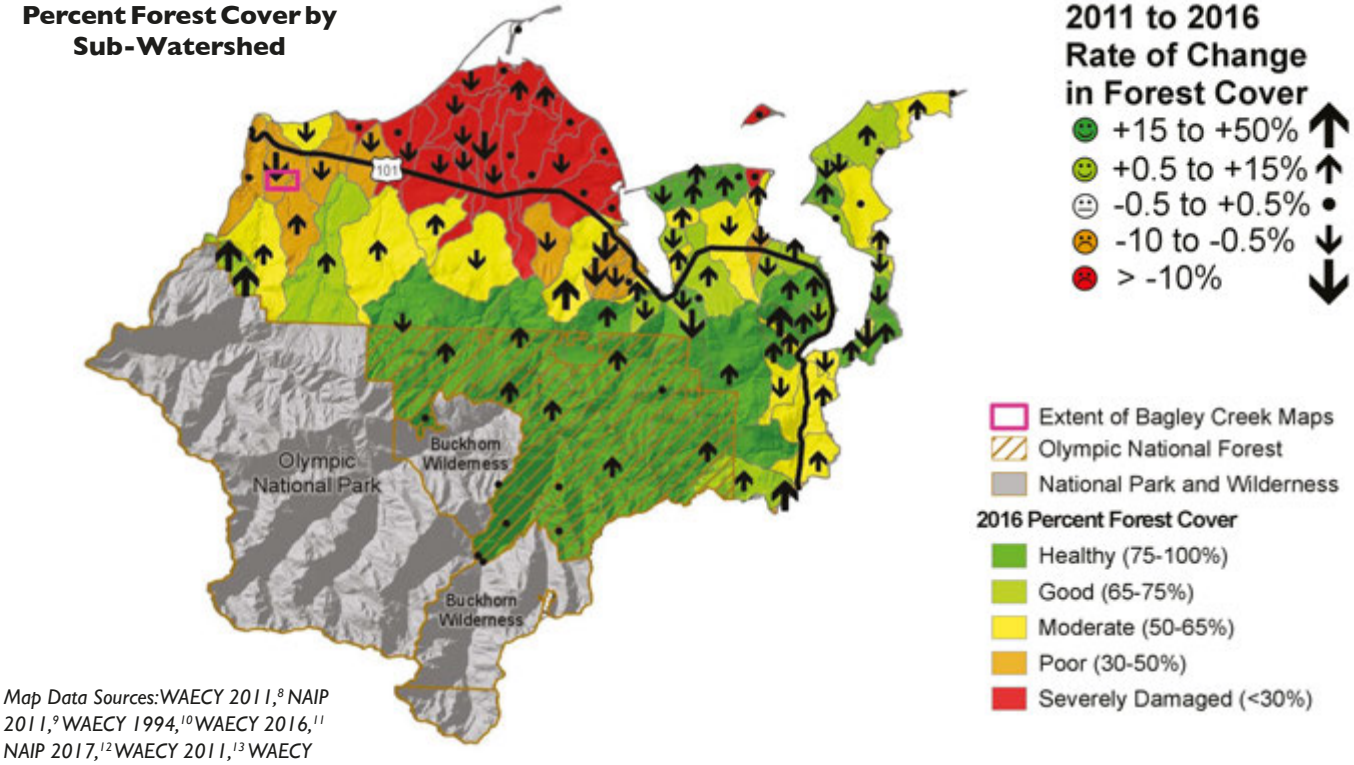
Surf Smelt — WDFW

Sand Lance — USGS

Herring — University of North Carolina

Forested Land Cover Critical for Watershed Health

Forest cover in the Jamestown S'Klallam Tribe's Area of Interest increased by 4.7 square miles from 2011-2016. However, of the 104 sub-watersheds in this area, those with moderate, poor, or severely damaged forest cover increased from 55 sub-watersheds in 2011 to 56 sub-watersheds in 2016. Thirty-seven sub-watersheds had an overall loss of forest cover from 2011 to 2016.



Map Data Sources:WAECY 2011,[8] NAIP 2011,[9] WAECY 1994,[10] WAECY 2016,[11] NAIP 2017,[12] WAECY 2011,[13] WAECY 2018,[14] WADNR 2014,[15] WADNR 2014[16]

Forested land cover is a vital component of healthy stream ecosystems at both the watershed and riparian corridor scales.[1] The Hood Canal and Eastern Strait of Juan de Fuca Summer Chum Salmon Recovery Plan[2] states that the "removal and modification of native riparian forests increases water temperatures, reduces stability of floodplain landforms, and reduces large woody debris recruitment to stream channels."

Loss of forest cover degrades aquatic ecosystems even when the level of impervious surface is low.[3] The threshold for minimal to severe stream degradation is 65% forest cover;[4] however, any level of disturbance has an impact on stream ecology.[5] Restoring forest cover through vegetation planting in riparian and adjacent areas is vital to salmon habitat restoration efforts in the Dungeness River.[6] While some forest cover is regained through plantings in working forests, much more is lost as forest land is converted and developed. Within the Jamestown S'Klallam Area of Interest but outside of the Olympic National Park and Buckhorn Wilderness, forest cover decreased in 37 sub-watersheds, 12 of which had losses over 5%. However, 22 sub-watersheds had increases in forest cover over 5%, resulting in a net gain in forest cover across the Area of Interest of 1.5% (3,029 acres) from 2011 to 2016.

Clearcutting Timber Harvest Damages Working Forests

Between 2011 and 2016, 133 acres of timberland were clearcut near Bagley Creek. Clearcutting forests can increase water temperatures and stream sedimentation while decreasing streamflow, all of which are detrimental to salmon and other species.[7]

Impervious Surface Negatively Impacts Water Quality

With the exception of northern part of the Jamestown Tribe's Area of Interest, many of the watersheds show little increase in impervious surface area from 2011 to 2016. However, the total impervious surface area has increased by 0.23% across their AOI. Four of the 113 sub-watersheds have a 1% to 4% increase in impervious surface area. Thirteen sub-watersheds have degrading watershed health (12-40% impervious surface area).

Figure 1. Percent Impervious Surface Area by Sub-Watershed

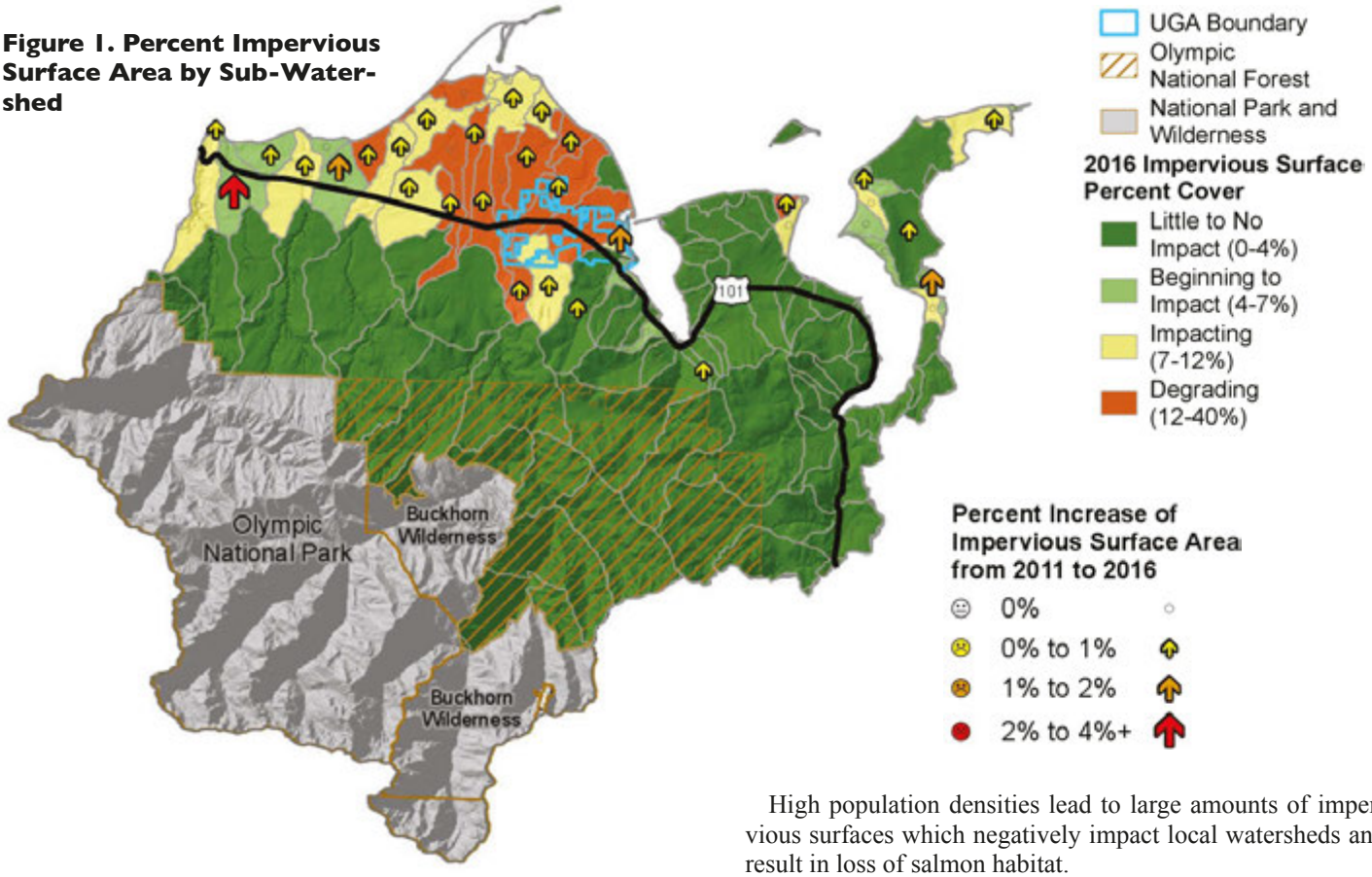
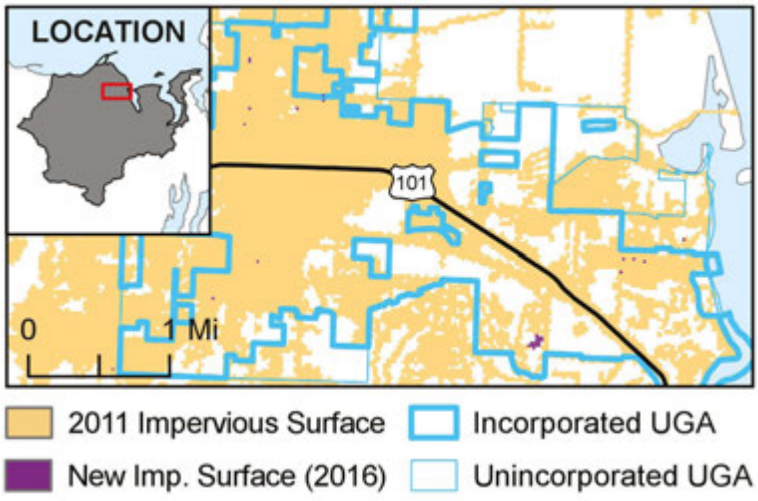


Figure 2. Impervious Surface Area in Sequim UGA



Map Data Sources: WAECY 1994,[7] WAECY 2011,[8] WAECY 2013,[9] WADNR 2014,[10,11] NLCD 2019,[12,13] UW[14]

High population densities lead to large amounts of impervious surfaces which negatively impact local watersheds and result in loss of salmon habitat.

The Sequim-Dungeness area is predominantly rural, but any level of human disturbance impacts watershed processes. Impervious surface area is well documented as a coarse measure of human impact on watershed scale hydrology and biology.[1,2,3] Impervious surface area causes increases in stream temperatures, decreases in stream biodiversity, and contributes to pollutants in storm water run-off, which can contaminate local aquatic systems.[4]

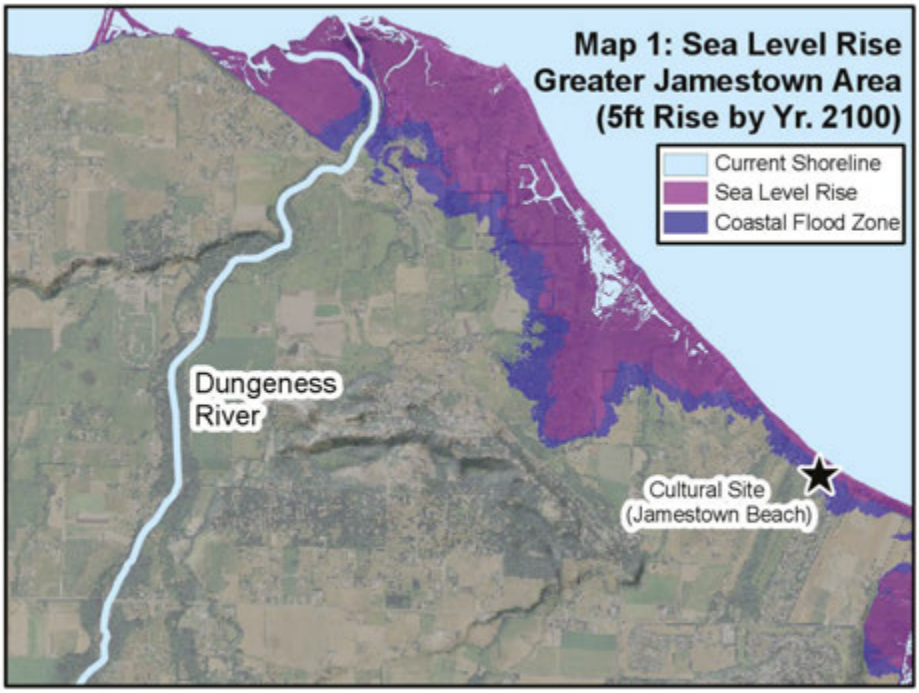
The Hood Canal and Strait of Juan de Fuca Summer Chum Recovery Plan describes thresholds of 10% impervious surface area in a watershed at which sensitive stream habitat elements are lost, while 25% to 30% impervious surface area results in poor water quality.[5] Within the Area of Interest, watershed health is beginning to be impacted (4-7%) in eleven sub-watersheds, impacted (7-12%) in 15 subwatersheds, and degraded (12-40%) in 13 sub-watersheds (Figure 1).

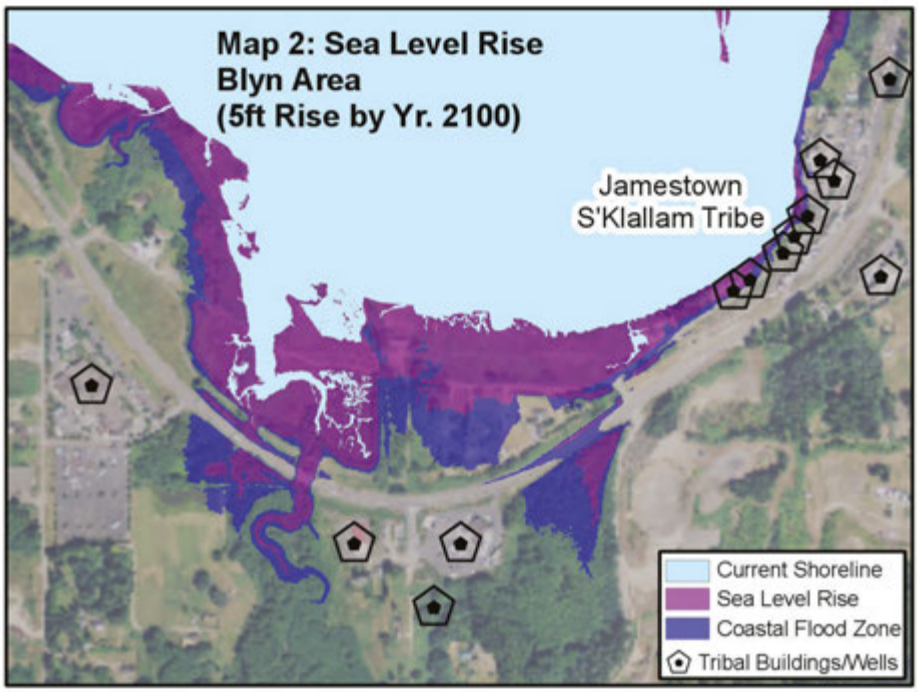
Each watershed has a different reaction to a given amount of impervious surface area: thresholds serve only to generalize the continuum of degradation that accrues as impervious surface area increases and forest cover is lost.[6]

Impervious surface increases were minimal between 2011 and 2016 in the Area of Interest, with 21 sub-watersheds having less than 1% increases and only four sub-watersheds having increases of 1-4% (Figure 2).

Vulnerability Assessment and Climate Change Adaptation Preparation

The Jamestown S'Klallam Tribe is on the forefront of addressing tribal vulnerabilities and preparing for climate change. The 2013 Jamestown Climate Vulnerability Assessment and Adaptation Plan provides an assessment of vulnerabilities of tribal resources to the negative impacts of climate change. The plan also identifies adaptation measures that the tribe is working to complete. Sea level rise, ocean acidification and climate models show potential for increased risks to critical habitats, tribal infrastructure and tribal health.





As one of the first tribes in western Washington to complete a climate adaptation plan and vulnerability assessment, the Jamestown S'Klallam Tribe has identified and prioritized areas where the changing climate conditions (i.e. changing precipitation patterns, sea level rise, ocean acidification) will leave tribal resources, infrastructure, economy and health most vulnerable.[1] Climate vulnerability depends largely on climate exposure, sensitivity and adaptive capacity.[2]

The tribe identified many vulnerabilities:

Impact to Salmon which is the foundation for almost all aspects of tribal cultural life and also serve as economic and nutritional resources for the tribe. Salmon will be impacted by the change in timing and amount of winter rains and flooding, scouring of egg redds (nests) during high flows, thermal stress from higher water temperature, and less water availability in the summer.

Oysters and clams also are highly vulnerable under expected conditions. Projected impacts include higher water temperatures and ocean acidification. There will also be an increased occurrence of shellfish poisoning associated with harmful algal blooms (which

(Continued on next page)

The maps (left) show flood conditions with a sea level rise model under the high severity scenario (Figure 1).[1] They show the potential inundation of a vital water source, closed roads, an important cultural site at Jamestown Beach (Map 1), and buildings on the tribal campus in Blyn (Map 2) where flood risk is projected to increase by the end of the century.[1]

Map Data Sources: Adaptation International Climate Models 2013,[8] NAIP 2013,[9] WAECY 2011,[10] USGS 2019[11]

To ensure continued economic growth, promote long-term community vitality, and protect sensitive resources and assets, it is essential that we incorporate climate change preparedness into our planning efforts and operations.

– W. Ron Allen, Jamestown S'Klallam Tribe Chairman

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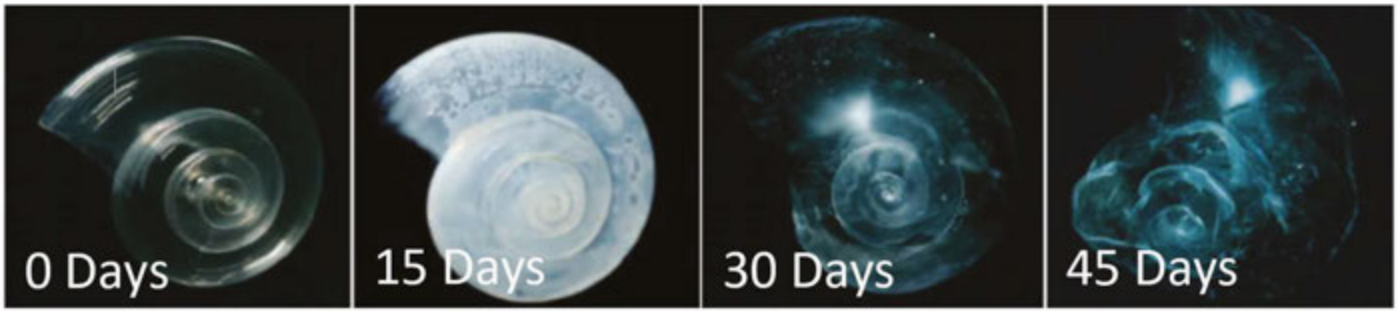
warmer conditions may favor), diminished health and wellness, economic loss, and increased flooding of tribal buildings, sacred historical places and infrastructure.[3]

Traditional ways of life and health are extremely vulnerable. The loss or displacement of traditional plants necessary for food, and fibers needed for traditional practices is likely. There are potential impacts to Indian health from forest fire smoke and loss of important traditional agricultural food and natural resources.



Ocean acidification (decrease in ocean pH) will cause waters to become "corrosive to shell-forming organisms such as oyster larvae, clams, mussels and crabs," posing serious threats to the shellfish in the Strait of Juan de Fuca.[4] Pictured are the pteropod shells dissolving because of the decreasing ocean pH.[5]

Figure 1: Sea Level Rise Projections, Sequim Region

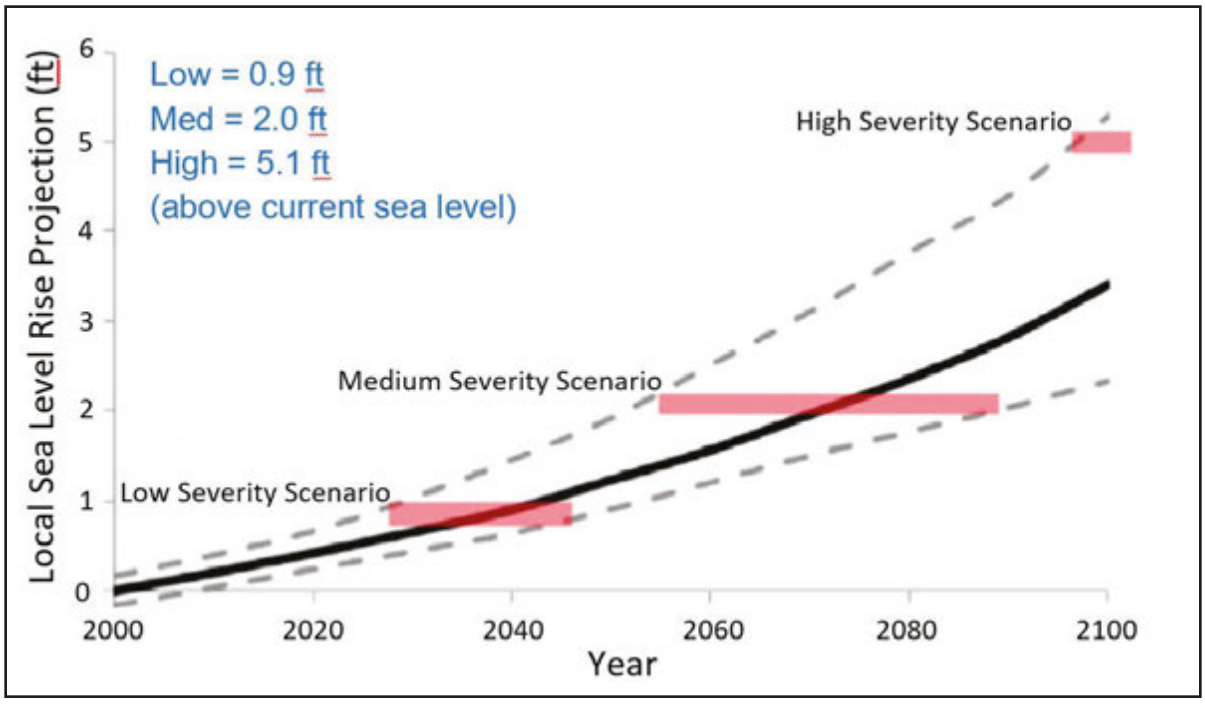


Figure 1 shows sea level rise in three scenarios (low, medium, high). This graph is from page 16 of the Jamestown Climate Vulnerability Assessment and Adaptation Plan.[6] The tribe has identified areas most susceptible to rising sea levels. The assessment has helped the tribe relocate several storage buildings that would have been otherwise affected.

Biotoxins Sampling for Public Health

Biotoxin monitoring in the Jamestown S'Klallam Tribe's Area of Interest ensures that only shellfish safe for human consumption are harvested. Long-term data will help us understand what factors increase harmful algal blooms in the Salish Sea.

The Jamestown S'Klallam Tribe has monitored phytoplankton as part of the SoundToxins program since 2008[1] (Figure 1). This monitoring identifies harmful algal blooms (HABs) that make shellfish tissue toxic for consumption or have negative impacts on fish and shellfish.

The tribe conducts phytoplankton net tows and collects water samples and ancillary oceanographic data weekly in the summer and biweekly in the winter (Photos 1 & 2). These samples are analyzed for species that can cause shellfish toxicity. In addition, the tribe takes shellfish tissue samples that are sent to Washington Department of Health for analysis. Shellfish testing is ramped up when toxic species are present and shellfish harvesting closures are issued when thresholds are exceeded (Figures 2 & 3).

There is concern that increased nutrient runoff into the Salish Sea may result in an increase of HABs and may be altering food webs.[2] In addition, some HABs can directly impact salmonid populations.

Phytoplankton monitoring helps understand what is in the water that may cause public health issues with shellfish. Over time, monitoring will discern what changes are happening in the Salish Sea as the waters acidify, warm and become more nutrient rich.[3]

The tribe is slated to do a pilot study in 2021 with Washington Department of Fish and Wildlife that will add phytoplankton and nutrient sampling to their existing zooplankton monitoring programs in Northern Hood Canal and Admiralty Inlet. This project is part of a larger effort from the Salish Sea Marine Survival Project, which aims to understand the factors affecting salmon survival in the Salish Sea.[4] By coupling these sampling efforts, the tribe will be able to understand the bottom up factors impacting salmon survival.

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Figure 1. Sequim Bay Biotoxin Sampling Sites

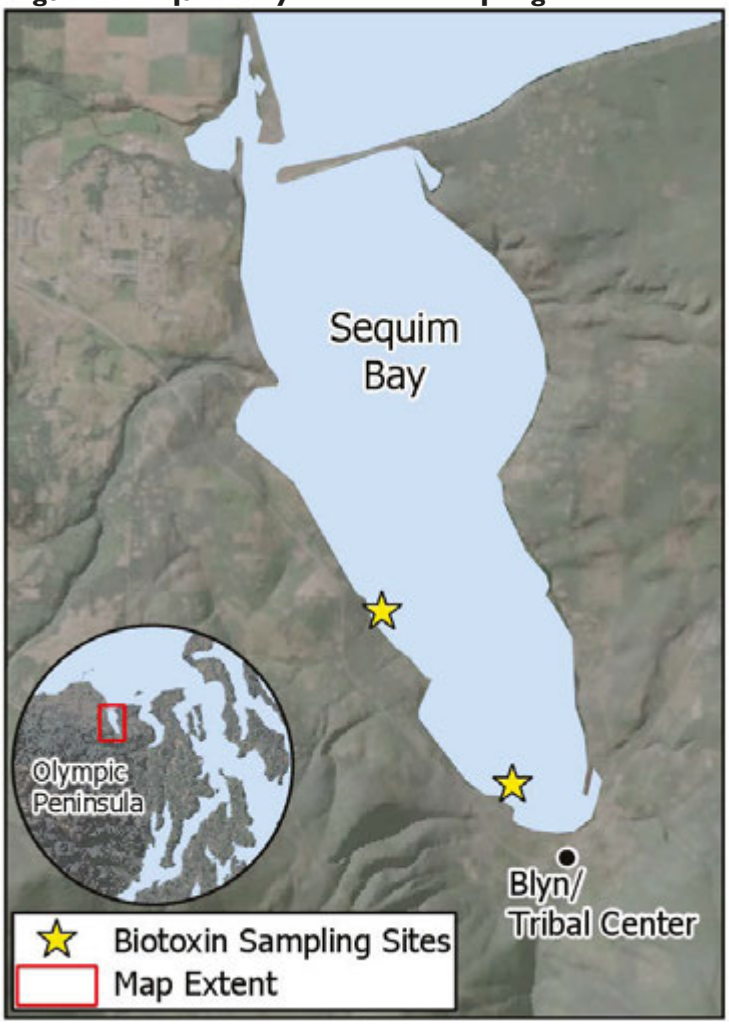


Photo 1. Water Sampling in Sequim Bay

Photo 2. Net Tow Sampling in Sequim Bay

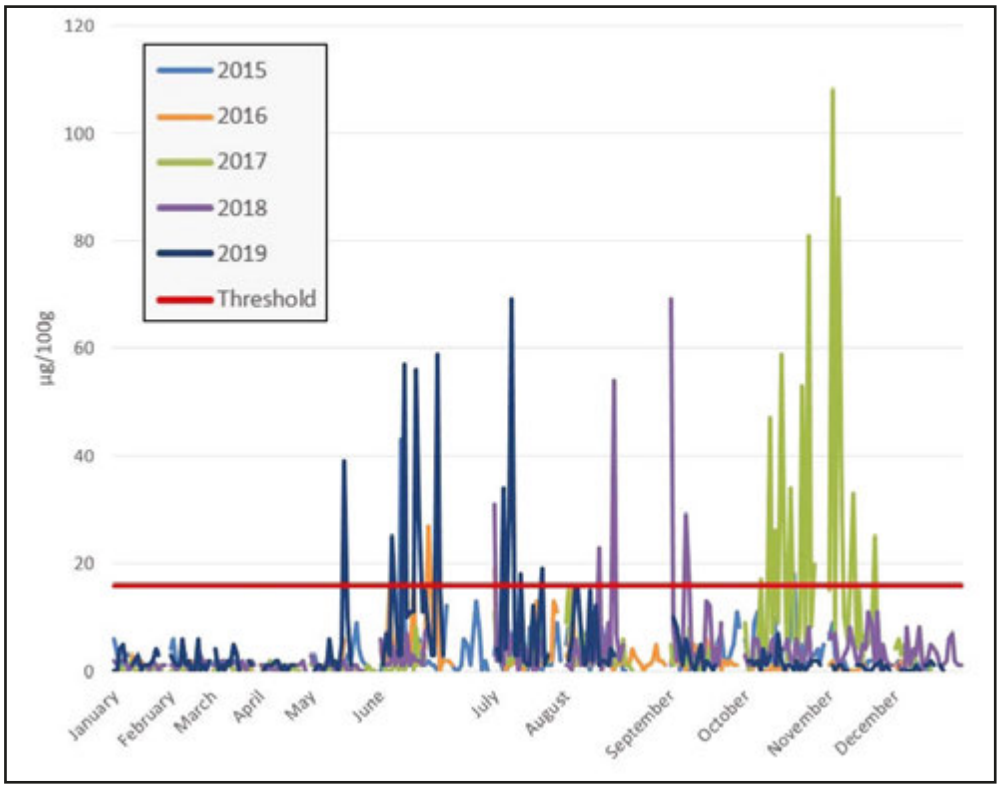
Tiffany Royal, NWIFC (2)

Map Data Sources: NAIP 2017,[7] WADNR 2014[8]

(Continued from previous page)

Figures 2 and 3 below show toxin threshold exceedances found in Sequim Bay. When PSP and DSP get to toxic levels, the shellfish harvesting areas are closed by the Washington State Department of Health, which greatly impacts the Jamestown S'Klallam Tribe's ability to harvest.

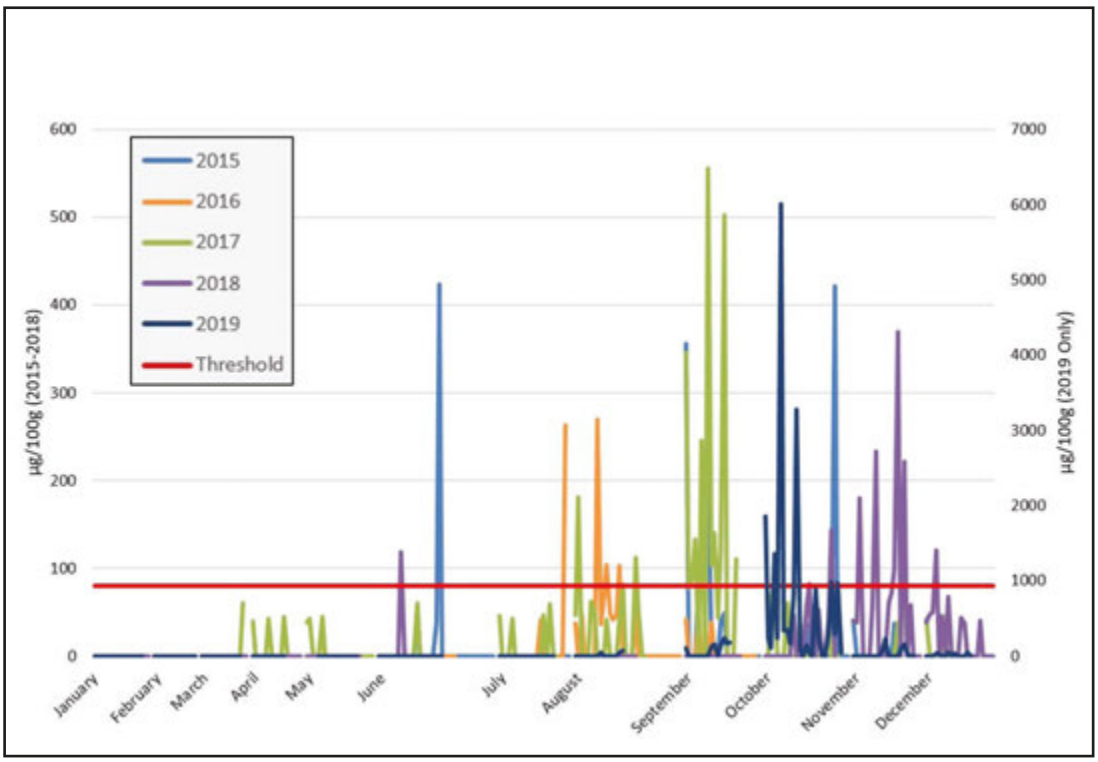
Figure 2. Diarrhetic Shellfish Toxins in Sequim Bay



Warning from Washington State Department of Health: "Paralytic Shellfish Poison (PSP) is a naturally occurring marine biotoxin that is produced by some species of microscopic algae. Shellfish eat these algae and can retain the toxin. People can become ill from eating shellfish contaminated with Paralytic Shellfish Poison. This biotoxin affects the nervous system and paralyzes muscles, thus the term "paralytic" shellfish poison. High levels of Paralytic Shellfish Poison can cause severe illness and death."[5]

There have been many threshold exceedances and corresponding shellfish harvest closures in recent years.

Figure 3. Paralytic Shellfish Toxins in Sequim Bay



Warning from Washington State Department of Health: "Diarrhetic Shellfish Poison (DSP) is a marine biotoxin toxin produced by the dinoflagellate *Dinophysis*, which is a type of naturally occurring microscopic algae. Shellfish eat these algae and can retain the toxin. People can become ill from eating shellfish contaminated with Diarrhetic Shellfish Poison."[6]

There have been many threshold exceedances and corresponding shellfish harvest closures in recent years.

Dungeness Floodplain Restoration Key to Salmon Recovery

Floodplains play an important ecological role in salmon recovery and creating healthy functioning habitat. The Jamestown S'Klallam Tribe has been actively working on projects to restore the Dungeness River for more than 30 years.

Figure 1. Dungeness River Floodplain

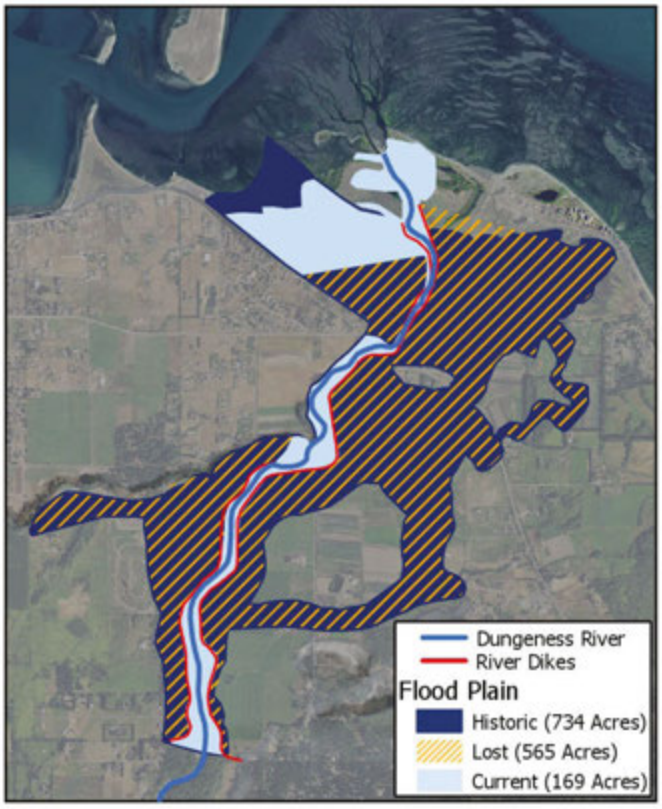
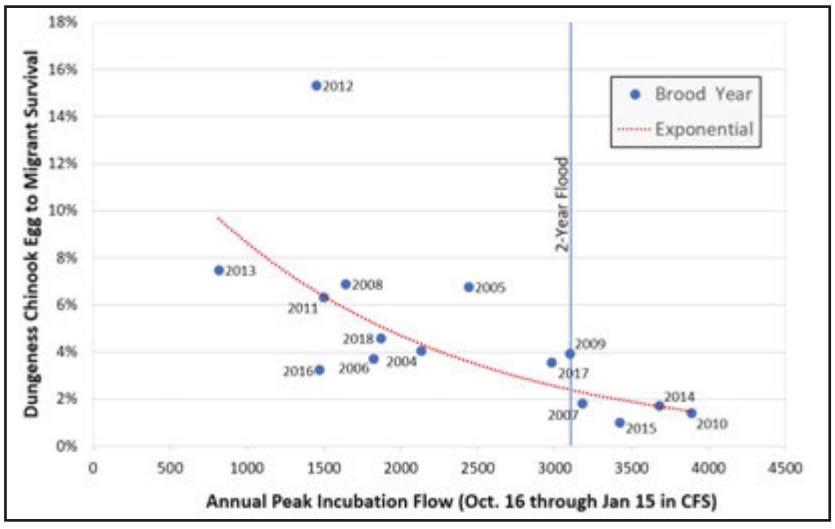


Figure 2. Impacts to Dungeness Chinook Egg-to-Smolt Survival



High water flows during chinook egg incubation period reduces the egg-to-smolt survival rate in the Dungeness River. The goal is to keep salmon survival rates high for healthy chinook populations and to support the tribe's invaluable resource.

Map Data Sources: NAIP 2017,[2] USGS 2018[3]

Figure 3. Dungeness River – Robinson Property

Before Restoration (March 2015)

After Restoration (January 2017)

The historic Dungeness floodplain was approximately 730 acres before 1963, but as a result of river diking, in 2019 only 169 acres remained intact[1] (Figure 1). These dikes eliminate natural river processes and greatly reduce the available habitat for salmon and other species (Figure 2). The Jamestown S'Klallam Tribe and their partners continue to work on major restoration projects in order to help preserve, protect and restore salmon habitat in the Dungeness watershed (Figure 3).

The Lower Dungeness River Floodplain Restoration Project goals are to:

(1) restore habitat-forming processes within two miles of the Dungeness River by eliminating a severe anthropogenic stressor (loss of floodplain processes due to river diking) by setting back the offending dike as near to the edge of the 100-year flood inundation area as possible.

(2) Remove a dike and restore 150 acres of former agricultural land to healthy floodplain. The coupling of these two activities with restoration creates a healthy, vibrant floodplain forest. Restoration of the floodplain included placement of large woody debris and reconnection of the river.

When the restoration is complete, the Lower Dungeness River will be approximately two miles of fully functioning river uninhibited by the river dikes. The river will be transformed and replete with high quality salmon habitat, functioning side channels and diverging channels that meander through a publicly owned, permanently protected floodplain forest on a trajectory to become old-growth forest.

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Tribal Assessment Report

CWA 106

Jamestown S'Klallam Tribe

Date: August 2020

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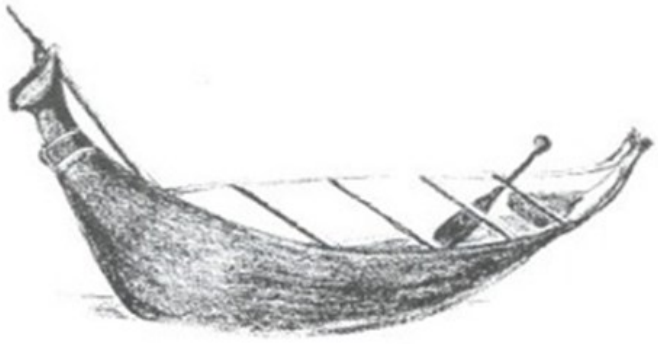

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I. Introduction – The Jamestown S'Klallam Tribe and Their Ancestral Home

The Jamestown S'Klallam Tribal community is located on the northern Olympic Peninsula of Washington State, approximately 70 miles northwest of the city of Seattle. The Dungeness and Sequim Bay Watershed is our Tribe's ancestral home. The Jamestown S'Klallam people lived and thrived here for thousands of years. They built their homes from ancient cedars, hunted large and small game, and caught salmon. They harvested shellfish, seaweed and berries in a way that was so sustainable it barely affected the abundance of the natural resources. In the 1850's the lives of the S'Klallam Indians was changed forever with the arrival of the first European settlers. The Jamestown band of S'Klallams were signatories to the Point No Point Treaty in 1855. In 1874, during early white settlement, the S'Klallam Indians pooled together $500 in gold coin in order to purchase land to avoid being sent to a reservation 90 miles away.

The refusal to move to a reservation eventually caused the S'Klallam to lose their Tribal status, but in 1981 the Tribe regained their federal recognition. The Tribe then purchased 2 acres of land in nearby Sequim Bay to create a reservation with an administrative facility and community center. Since this modest beginning the Tribe's social, health, economic and natural resource programs, as well as its landbase, have grown significantly. Today the Blyn Tribal community consists of a North and South campus (these buildings house the Administration, Health and Human Services, Natural Resources, Planning, Social Services, and Accounting departments), 7 Cedars Casino, Longhouse Market and Deli, Children's Program Center, library and dental clinic. Tribal land holdings now exceed 1400 acres of non-contiguous parcels scattered in numerous watersheds within the Tribe's Usual and Accustomed (U & A) treaty area. In the attachments, maps 1, 2 and 3 are of the Tribe's U&A and planning areas. Trust lands total approximately 288 acres and the reservation totals approximately 282 acres. The Tribe also has 877 acres of fee properties with a total of 1,448 acres. The holdings are within two watersheds ranging from 172,000 acres (Dungeness) to 35,813 acres (Sequim Bay).

The Jamestown S'Klallam Tribe has a comprehensive plan which guides the work programs and priorities of the staff. The goals of the water quality monitoring program stem from a goal of the Comprehensive Plan:

> *The Jamestown S'Klallam Tribe has maintained the right to fish, shellfish, hunt and gather. But that right is empty if there are no fish to catch, no clams to dig, no elk to hunt or berries to gather. Our greatest natural resource concern is that the environment these natural resources live in and the habitat that supports healthy populations be protected. If threatened with harm, the environment must be protected and kept in a highly productive state. If damaged, the habitat must be restored so that fish and wildlife may prosper. If natural resources are in decline, they must be improved so that future populations may thrive.*

Sub-goals of the Comprehensive Plan include:

> *… healthy, sustainable resources for harvest opportunities, to benefit economically from commercial harvests, to put food on our tables as a result of subsistence harvest and to have access to traditional resources for cultural purposes and for ceremonies. (Jamestown S'Klallam Tribal Comprehensive Plan, © Jamestown S'Klallam Tribe 2016).*

II. Jamestown S'Klallam Water Quality Monitoring Program - Background

The purpose of this Tribal Assessment Report (TAR) is to describe the water quality of the Dungeness and Sequim Bay watersheds as assessed by JST from (2015-2019). Both watersheds have provided the Jamestown S'Klallam Tribe an abundance of fish and shellfish since traditional times. The Jamestown S'Klallam Tribal Water Quality Monitoring Program is in the Natural Resources department. The Water Quality Department has been monitoring surface waters for over 20 years. The Jamestown S'Klallam Tribe has a comprehensive understanding of the water quality in the Dungeness and Sequim Bay watersheds and is continually adding more parameters to further understand, protect and improve its water quality. A more detailed explanation of the monitoring program and objectives are available in the Tribe's EPA approved *Water Monitoring Strategy for the Jamestown S'Klallam Tribe (JST 2019)*. The Tribe's water quality monitoring program is currently considered "fundamental" according to EPA's reporting recommendations and levels. The Tribe previously operated under "mature" status but due to funding constraints the Tribe hasn't collected Macroinvertebrate data in the past 6 years. This has resulted in changing the Tribes reporting level to "fundamental".

A. Dungeness Watershed

The Dungeness River Watershed consists of 172,500 acres of tall mountains, thriving forests and fertile lowlands in the Northeast corner of the Olympic Peninsula. The main stem of the Dungeness is 31.9 miles and the largest Tributary, the Greywolf River, is an additional 17.4 miles (Haring, 1999). The Dungeness River is one of the steepest on the Olympic Peninsula; from River Mile 30 to River Mile 1 the Dungeness drops more than 6000 feet.

Once abundant with salmon the Dungeness River now has four species of fish listed under the Endangered Species Act as threatened (Chinook, Summer Chum, Bull Trout and Puget Sound Steelhead). In order to thrive; salmon need adequate flow, cool temperature, clean water and a constant supply of food with a mix of habitat to live in (boulders, pools, riffles, shade trees, and large woody debris). A primary goal of the Tribe is to restore and protect salmon.

Dungeness Bay is an important cultural and economic resource for shellfish to the Tribe. In 1997 the Washington State Department of Health (DOH) reported increasing levels of fecal coliform bacteria in Dungeness Bay near the mouth of the Dungeness River (DOH, 1998). Fecal coliform levels continued to increase near the mouth of the river as well as in the inner Dungeness Bay.

As a result, by 2001 DOH closed nearly all of Dungeness Bay to all shellfish harvest year-round. Also resulting in the closure of the tribally owned Jamestown Seafood Company that was located on Dungeness Bay where they sold clams, oysters and crab.

Map 1. Dungeness Bay Classifications with monitoring sites and Tribe's DNR lease area.

After nearly two decades of work from multiple partners DOH has upgraded nearly 800 acres of Dungeness Bay from Conditionally Approved to Approved and 40 acres from Prohibited to Conditionally Approved (2018). A small area around the Dungeness River mouth remains Prohibited year round. In 2016, the Tribe asked DOH to set a new monitoring station in the northern corner of Dungeness Bay between stations 109 and 107. This site has the potential to open additional acres of Dungeness Bay for shellfish harvest and possibly future aquaculture.

B. Sequim Bay Watershed

The Sequim Bay watershed is located in Clallam County on the Olympic Peninsula in northwest Washington State. The watershed drains an area of approximately 35,813 acres, from its highest point at Mt. Zion (4,273') in Olympic National Forest, north to the Strait of Juan de Fuca. Sequim Bay watershed is bounded on the east by Discovery Bay watershed and on the west by Dungeness watershed. Jimmycomelately Creek is Sequim Bay's primary subbasin. Other significant subbasins draining to Sequim Bay include Johnson, Dean, and Chicken Coop creeks. Bell Creek drains into Washington Harbor. A series of smaller unnamed creeks between Johnson and Dean Creeks also provide runoff to the western shore of Sequim Bay (Parametrix 2000). Topography is steep in the upper, forested portions of the watershed with more gentle and flatter slopes toward Sequim Bay. In addition to the subwatershed drainages listed above, water used for domestic and farmland irrigation enters Sequim Bay from the Dungeness River through irrigation tailwaters in Bell and Johnson Creeks and one ditch north of John Wayne Marina.

The Jamestown S'Klallam Tribal reservation and community is located at the south end of Sequim Bay. The reservation land is approximately 20 acres and is the location of critical Tribal facilities: administrative center, library, health and human services facility, dental clinic, casino and gas station complex with a market and deli and fire station. In 2018 a Casino expansion

project and new Public Safety and Justice Center broke ground for construction on the Tribe's reservation within the Blyn watershed. While we continue to increase economic development, we also continue to work hard at keep cultural/traditional programs available for our community while protecting and enhancing our natural resources.

The Tribe is continuing its efforts to reduce its dependency on federal and state funding. Thus substantial commercial development has occurred and is planned on reservation lands within Sequim Bay Watershed. At the same time, the Tribe maintains a strong commitment to environmental protection. Storm water generated on Tribal developments ultimately finds its way to Sequim Bay through surface and ground water. Therefore, determining BMP effectiveness is a key part to our pollution prevention strategy.

The Sequim Bay Watershed provides habitat for coho salmon, cutthroat trout, and ESA listed summer chum and steelhead. Today the Tribe is actively growing aquaculture in south Sequim Bay on its tidelands. Tribal citizens commonly harvest subsistence shellfish and commercial clam digs are held throughout the year to Tribal harvesters.

This last year our Aquaculture programs have increased significantly. Additional acres of geoduck were planted as well as harvested. Oyster and clam beds are continually re-seeded. Yearly surveys and monthly monitoring occur to ensure that the populations are healthy and thriving.

Figure 2. Women Clamming in Sequim Bay.

Figure 3. Geoduck crew seeding geoduck, 2018.

Figure 4. Geoduck harvested by divers.

Figure 5. JST Barge working on tidelands with 7 Cedars expansion in the background, 2020.

Jimmycomelately Creek (JCL) is the largest drainage into Sequim Bay. In 1999, only 7 summer chum returned to Jimmycomelately creek. In 2000-2004, the Jamestown S'Klallam Tribe led a large-scale restoration project on Jimmycomelately, Dean Creek, and their Sequim Bay Estuaries. This project has restored and enhanced approximately 8 miles of stream, .26 square miles of estuarine delta and is responsible for saving a summer chum population from near extinction. In 2004, 1700 chum returned to spawn in JCL creek and since nearly 5000 chum return to JCL each year. While the JCL restoration project is considered a success story there is still concern about the sustainability of the summer chum run. There has been a sudden drop in returning chum in 2017 and 2018. 2017 summer chum had 530 returning and 2018 had an alarming 167. The summer chum threshold for a sustainable run is based on a 5-year average of around 700 fish per year. Because summer chum return as 3 and 4-year-old adults these numbers could balance out softening the blow if a low return year. There are numerous documents available on the restoration project and most recently the Tribe and partners completed the Jimmycomelately Ecosystem Restoration Monitoring report (Years 2004-2011). The Jimmycomelately monitoring report includes data assessment and analysis on the following water quality parameters: Dissolved oxygen, pH, temperature, conductivity, inter gravel dissolved oxygen (IGDO), fecal coliform and a suite of nutrient data (total phosphorus, total nitrogen, silicate, ammonia, nitrate, nitrite, and phosphorus). Since the restoration project, Jimmycomelately creek and it's neighboring drainages are still being closely monitored.

Figure 6: Summer Chum spawning in JCL, 2015

B. Purpose and Scope

The purpose of this water quality monitoring and assessment program is to determine whether water quality criteria are being met. Our objectives of this data assessment are:

1. Meet the EPA reporting requirements for a fundamental Tribe.
2. Provide maps of the Tribal water resources and a brief narrative description of the monitoring program and assessment methods.
3. Provide summary tables of water bodies being monitored and whether they are meeting designated uses.
4. Provide summary tables of causes and sources of impairment.

The following table displays the overall monitoring objectives of the Tribes Water Quality Program.

Table 1. Overall Monitoring Objectives

Program Area	Objectives
Overall Water Quality Program	1. Assess the overall water quality of the waters adjacent to and on reservation and trust lands, and conduct periodic reassessments. 2. Through regular monitoring assess the water quality and establish if the water quality is meeting state standards on and off Tribal lands. 3. Through regular monitoring assess if marine waters support shellfish harvest and consumption. 4. Characterize fecal coliform bacteria and nutrient concentrations for ambient and source identification monitoring. 5. Pin point areas that need further investigation. 6. Develop protection and improvement plans for water resources and habitat.
Nonpoint Source Program	1. Establish a monitoring plan that identifies areas that are impacted by non-point pollution. Bracket areas of concern identifying waters that need further sampling. 2. Implement source identification monitoring as needed. 3. Analyze existing data for any trends and see if there are improvements in the watershed. 4. Evaluate the effectiveness of best management practice (BMP) installation.
Water Quality Standards	1. Continue to use State Water Quality Standards and identify areas that are not meeting state standards. 2. Use EPA's Ambient Water Quality Criteria Recommendations for Rivers and Streams in Nutrient Ecoregion 2 (EPA 2000). Because Washington State has not developed water quality criteria for nutrients in estuaries and coastal bays we are using the criteria set by the Massachusetts Estuaries Project (MEP) and Maryland Coastal Bays Program as comparison for our nutrient monitoring program

III. Monitoring Program Overview – Field and Laboratory

The monitoring in this report has occurred under the EPA approved Quality Assurance Project Plan for Ambient Monitoring in Sequim and Dungeness Bay Watershed (JST 2010).

Sampling methods and protocols were adapted from the Department of Ecology and Streamkeepers of Clallam County field manuals. (http://www.clallam.net/streamkeepers/html/quality_assurance.htm).

A. Dungeness Watershed Monitoring

The Dungeness Watershed has a long history of water quality monitoring. Table 2 displays freshwater monitoring stations and their monitoring frequency. The Jamestown S'Klallam Tribe continues to work side by side with other agencies and within their community to improve both water quality and habitat in the Dungeness Watershed. The Clean Water District and Clean Water Workgroup were formed in 2001. Partners include: Clallam County Environmental Health (CCEH), Clallam Conservation District (CCD), Washington State Department of Fish and Wildlife (WDFW), The City of Sequim and numerous landowners

Despite the recent Dungeness shellfish upgrade, Dungeness Bay has a history of fecal coliform pollution problems that have dramatically impacted the commercial shellfish harvest as well as the subsistence harvest for Jamestown S'Klallam Tribal Citizens.

In 2012, the clean Water Workgroup partnered with the CCD and other agencies to develop a Pollution and Identification and correction plan (PIC Plan). The plan was designed to more effectively and efficiently improve water quality in the bay and to the water ways. Since 2015 CCEH has provided regular updates to full PIC Plan and QAPP. These can be viewed at http://www.clallam.net/hhs/EnvironmentalHealth/PICProject.html.

There are two key elements to the PIC plan:

1. Trends monitoring: Monthly monitoring performed by Clallam County volunteer group Streamkeepers. Yearly analysis of the monthly sampling is used to determine focus areas for targeted sampling.
2. Targeted sampling: segmented sampling of a chosen focus area performed by the Tribe and one CCEH staff. Focus areas are chosen for pinpointing bacteria sources and correction.

Table 2: PIC Trends Water Sampling Sites

Location Description	Lat	Long	Station ID	Sampling Frequency	Data Type
Agnew ditch @ 1079 Finn Hall Rd.	48.11253079	-123.2524477	Agnew ditch @ 1079 Finn Hall Rd.	Quarterly	Field parameters* Bacteria Nutrients
Bagley Creek at Olympic Discovery Trail	48.10504325	-123.3373204	Bagley 0.7a	Quarterly	Field parameters* Bacteria Nutrients
Bell Creek at Schmuck Rd.	48.08349356	-123.0571914	Bell 0.2	Monthly	Field parameters* Bacteria Nutrients
Cassalery at Mouth	48.13458387	-123.0965322	Cassalery 0.0	Monthly	Field parameters* Bacteria Nutrients
Cassalery from Jamestown Beach Rd.			Cassalery 0.6	Monthly	Field parameters* Bacteria Nutrients
Chicken Coop from Olympic Discovery Trial	48.0300081	-122.9930852	Chicken Coop 0.24	Quarterly	Field parameters* Bacteria Nutrients
Cooper Creek at the end of Three Crabs Rd.	48.13737962	-123.1015857	Cooper 0.1	Monthly	Field parameters* Bacteria Nutrients
Dean Creek at Olympic Discovery Trail	48.02420806	-123.0110276	Dean 0.17	Quarterly	Field parameters* Bacteria Nutrients
Gierin Creek from Holland Rd.	48.10226895	-123.0753668	Gierin 1.8	Quarterly	Field parameters* Bacteria Nutrients
Golden Sands Slough at 3 Crabs Rd.	48.14145394	-123.107041	Golden Sands slough 0.0	Monthly	Field parameters* Bacteria Nutrients
Hurd Creek near Hatchery	48.12096359	-123.143384	Hurd 0.2	Quarterly	Field parameters* Bacteria Nutrients

Location Description	Lat	Long	Station ID	Sampling Frequency	Data Type
Jimmycomelately Creek upstream of HWY 101	48.01954417	-123.0068501	Jimmycomelately 0.15	Monthly	Field parameters* Bacteria Nutrients
Johnson Creek at John Wayne Marina	48.06214585	-123.041126	Johnson 0.0	Monthly	Field parameters* Bacteria Nutrients
Lotzgesell Creek above Game Farm	48.13582232	-123.1505104	Lotzgesell 0.1	Monthly	Field parameters* Bacteria Nutrients
Matriotti Creek at Olympic Game Farm	48.13629445	-123.1455354	Matriotti 4	Monthly	Field parameters* Macroinvertebrates
McDonald Creek at Old Olympic HWY	48.10528933	-123.2218552	McDonald 0.16	Quarterly	Field parameters* Bacteria Nutrients
Meadowbrook creek nr. Mouth	48.15100477	-123.1220129	Meadowbrook 0.1	Monthly	Field parameters* Bacteria Nutrients
Meadowbrook Slough	48.14870302	-123.1253397	Meadowbrook 0.23	Monthly	Field parameters* Bacteria Nutrients
No Name Creek at JST Tribal Center	48.02592946	-122.996965	No Name 0.03	Quarterly	Field parameters* Bacteria Nutrients
Siebert Creek at Olympic Discovery Trail	48.1065982	-123.2791146	Siebert 1.0	Quarterly	Field parameters* Bacteria Nutrients
Sequim Bay State Park Creek	48.04133733	-123.3373204	State Park Creek 0.0	Monthly	Field parameters* Bacteria Nutrients

***Field Parameters: DO, pH, temperature, and Turbidity.**

B. Sequim Bay Watershed

The Tribe has tested freshwater streams that drain into Sequim Bay for fecal coliform and water chemistry for over twenty years. Nutrient monitoring was added to the Tribes water quality program in 2009. In 2015, the PIC trends monitoring program began sampling the Blyn area streams and waterways entering Sequim Bay. These data are assessed in this report.

In addition to water quality monitoring in the Sequim Bay Watershed, the Tribe also conducts yearly steelhead and coho spawning surveys on Jimmycomelately creek (Sequim Bays largest tributary). Smolts are also trapped and measured during their outmigration every spring using a smolt trap. This data is provided to WDFW yearly.

C. Nutrient Monitoring

According to the *State* –EPA Nutrient Innovations Task Force (EPA 2009), nutrient pollution ranks as one of the top causes of surface water quality impairment in the United States. Nutrients are chemical compounds that contain nitrogen and phosphorus. Both these compounds are essential for plant growth, but high in concentration they can become contaminants. Nutrients over-enrichment can cause a host of problems in both fresh and marine waters. Harmful Algal blooms, fish kills, eutrophication, outbreaks in shellfish poisoning, and hypoxia/anoxia are all related to elevated nutrients. This is a serious concern for many drainages in both the Sequim and Dungeness Watersheds because they drain to the intertidal areas where the Tribe grows shellfish and many Tribal members practice treaty harvest.

IV. Total Extent of Waters Assessed for Water Quality and Habitat

The Tribe has monitored water quality on the Dungeness River from the mouth to river mile 18.0. This monitoring approach revealed pristine water quality in the upper reach high above development. The lower 3 miles of the Dungeness have shown concerns of elevated levels of fecal coliform and a growing concern of elevated nutrients.

Seventy seven percent of the total stream miles remain unassessed for bacterial pollution. However, the stream reaches most impacted by nonpoint source pollution are in the lower 3 miles and these reaches are where our efforts are concentrated. Our assessment percentage in the highest impacted reaches is approximately 25%. These areas are in the growth area of the Sequim and Dungeness communities.

The Tribe continues to conduct yearly spawning surveys for steelhead, coho and chum salmon on both the Dungeness and Greywolf Rivers. Redds are mapped from lower

Dungeness up to River mile 17.5 and up to RM 5.1 in the Greywolf river. Redd data is stored in the Tribes GIS as well as given to the State Department of Fish and Wildlife. It is also important to note that we have monitored temperature and dissolved oxygen during the seasonal warm months as high as river mile 18.0 on the Dungeness adding to miles assessed for water quality.

The Tribe has also performed habitat assessments on Bell and Dean Creeks, Jimmycomelately, Chicken Coop, Matriotti, Seibert and McDonald Creeks. A total of 25 miles of stream were assessed for water quality and 12 square miles of estuarine habitat were monitored and assessed for water quality.

A. Data Analysis and Assessment

The goal for all waters in the Tribes U&A is to support aquatic life, recreational uses, salmonid spawning, rearing and migration. Tables 11 -13 display the water bodies monitored and the designated uses that those water bodies support.

All water quality data collected by the Tribe is stored in the Northwest Indian Fish Commission (NWIFC) Integrated Tribal Database. From the data base, all project data is submitted to EPA through the NWIFC Tribal Node. All of the PIC segmented sampling results collected up to December 2018 have been entered into WQX templates. Due to database access issues and COVID-19, the 2019 data will be migrated to WQX when access is available.

Data collected at each sampling station is compared to current Washington State Water Quality Standards for fecal coliform bacteria. The Jamestown S'Klallam Tribe has not adopted their own water quality standards. Therefore, the Tribe uses the Water Quality Standards for Surface Waters of the State of Washington criteria to evaluate water quality data. Data analysis is calculated in excel.

V. Data Analysis and Results

The following tables and charts provide summary results of data collected by Streamkeepers of Clallam County and the Jamestown S'Klallam Tribe. Streamkeepers volunteer group collect the samples and water quality data at all PIC trends monitoring stations in both Dungeness and Sequim bay watersheds. Geometric mean and 90th percentile were calculated on all PIC trends data from 2018-2019, these data were compared to previous CWD sampling results where applicable. Some sites were compared to previous PIC trends results from 2015-17.

PIC trends data is used to select PIC focus areas that have elevated fecal coliform levels. This determines what area will be focused on for further investigation and to identify a "hot-spot". This segmented sampling brackets areas of concern and will hopefully help

pin-point sources of fecal coliform. The Jamestown S'Klallam Tribe and partners from Clallam County Environmental health sampled three focus areas from 2016-2017 in the Dungeness lowlands. These areas are located on Meadowbrook Creek and slough and Golden Sands Slough. All three of these water bodies drain into Dungeness Bay, see maps 8 and 9.

Phase two of PIC began with a review of trends data showing elevated fecal coliform levels in Matriotti creek. January of 2017 the Tribe and County began a new focus on Matriotti and Lotzgesell creeks. During the same time continuous work has resumed on the Golden Sands and Meadowbrook slough areas.

Table 3 displays the PIC Trends monitoring results and whether they are meeting the Washington State geometric mean or 90th percentile criteria. Sites that made a dramatic change from meeting standards to failing are highlighted in red. Coincidently the sites highlighted are part of the PIC focus areas for 2020-2021. Areas that continue to fail to meet fecal coliform standards, like Meadowbrook and Golden Sands slough continue to be on the PIC radar and follow-up sampling continues periodically.

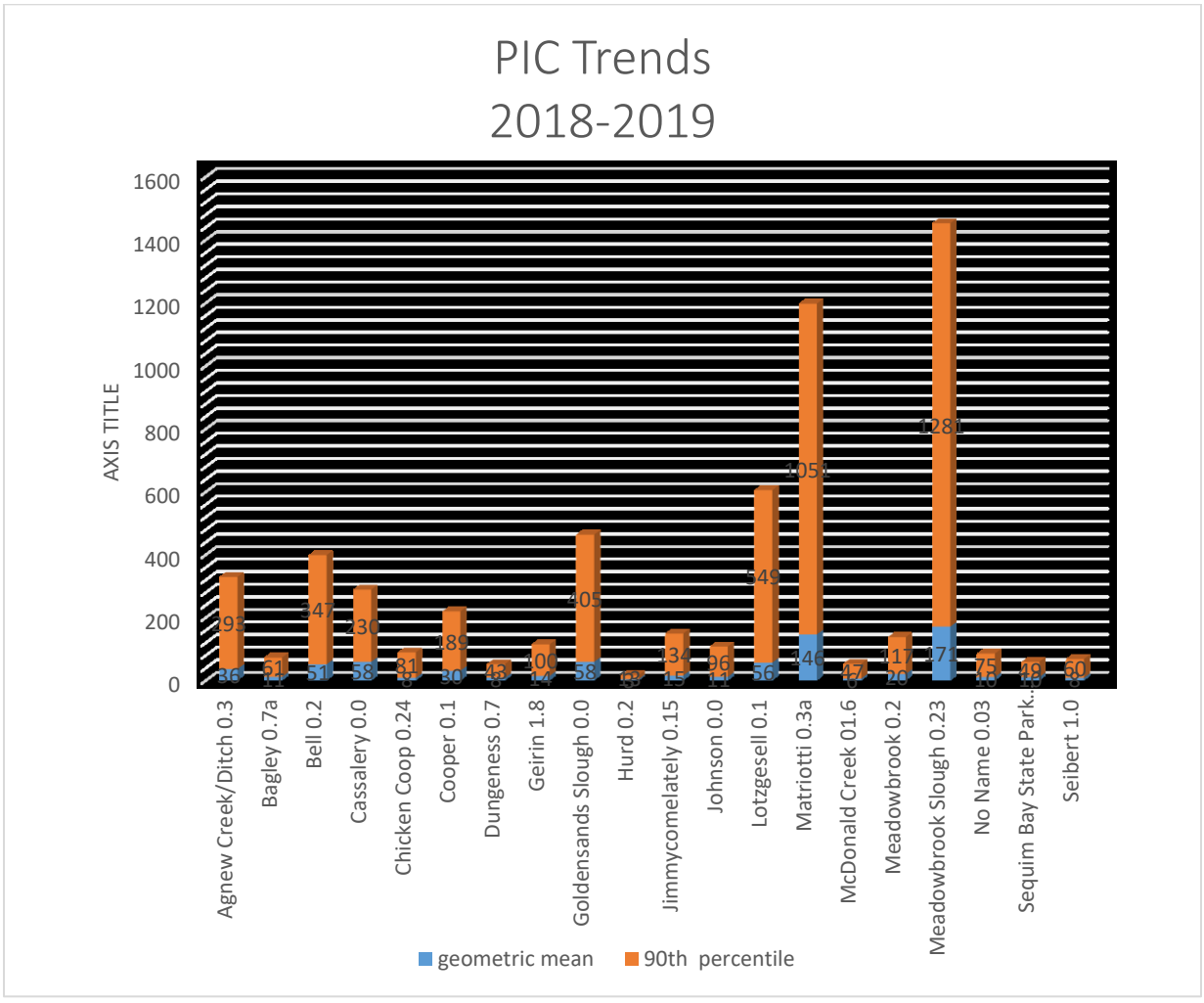


Table 3: PIC Trends Monitoring Results – Waters entering Dungeness Watershed and Strait of Juan De Fuca

Site and Monitoring Period	Geometric Mean (50 fc/100mL)	90th Percentile (100fc/100mL)	Number of Samples	Meets Geomean?	Meets 90th percentile?
Agnew/Ditch 0.3					
2013-2015	18	109	9	Yes	No
2017-2018	30	88	5	Yes	Yes
2018-2019	36	293	4	Yes	No
Bagley Creek 0.7a					
2013-2015	18	109	9	Yes	No
2017-2018	18	62	5	Yes	Yes
2018-2019	11	61	4	Yes	Yes
Bell 0.2					
2015-2017	24	183	21	Yes	No
2017-2018	28	75	8	Yes	Yes
2018-2019	58	230	7	No	No
Chicken Coop 0.18					
2015-2017	9	59	11	Yes	Yes
2017-2018	13	78	5	Yes	Yes
2018-2019	8	81	4	Yes	Yes
Cooper 0.1	**TMDL (35fc/100mL)**	**TMDL (100fc/100mL)**			
2015-2017	10	55	27	Yes	Yes
2017-2018	31	44	15	Yes	Yes
2018-2019	30	189	14	Yes	No
Dung. Rv. 0.7	**TMDL (9fc/100mL)**	**TMDL (43fc/100mL)**			
2015-2017	4	23	27	Yes	Yes
2017-2018	4	13	15	Yes	Yes
2018-2019	8	43	14	Yes	Yes
Gierin Creek 1.8					
2013-2015	18	109	9	Yes	No
2017-2018	19	156	5	Yes	No
2018-2019	14	100	4	Yes	Yes
Golden Sands	**TMDL (19fc/100mL)**	**TMDL (100fc/100mL)**			
2015-2017	45	237	27	No	No
2017-2018	16	63	15	Yes	Yes
2018-2019	58	405	13	No	No
Hurd Creek 0.2					
2015-2017	7	39	7	Yes	Yes
2017-2018	3	8	5	Yes	Yes
2018-2019	3	13	4	Yes	Yes

Site and Monitoring Period	Geometric Mean (50 fc/100mL)	90th Percentile (100fc/100mL)	Number of Samples	Meets Geomean?	Meets 90th percentile?
Jimmycomelately Creek 0.15					
2015-2017	11	62	24	Yes	Yes
2017-2018	16	94	15	Yes	Yes
2018-2019	15	134	14	Yes	No
Johnson Creek 0.0					
2015-2017	11	62	24	Yes	Yes
2017-2018	16	94	15	Yes	Yes
2018-2019	11	96	14	Yes	Yes
Mat 0.3a	**TMDL (60fc/100mL)**	**TMDL (170fc/100mL)**			
2015-2017	93	314	28	No	No
2017-2018	114	569	15	No	No
2018-2019	146	1051	13	No	No
Meadowbrook Cr. 0.2					
2015-2017	7	37	17	Yes	Yes
2017-2018	7	18	15	Yes	Yes
2018-2019	20	117	14	Yes	No
Meadowbrook Sl. 0.23					
2015-2017	24	203	15	No	No
2017-2018	84	414	15	No	No
2018-2019	171	1281	13	No	No
McDonald Creek 0.16					
2015-2017	11	114	7	Yes	No
2017-2018	6	19	5	Yes	Yes
2018-2019	6	47	4	Yes	Yes
No Name Creek 0.1					
2015-2017	6	29	7	Yes	Yes
2017-2018	7	68	5	Yes	Yes
2018-2019	10	75	4	Yes	Yes
Seibert Creek 1.0					
2015-2017	4	30	7	Yes	Yes
2017-2018	5	17	5	Yes	Yes
2018-2019	8	60	4	Yes	Yes
State Park Creek 0.0					
2015-2017	5	19	16	Yes	No
2017-2018	18	152	12	Yes	No
2018-2019	10	49	14	Yes	Yes

- **PIC Trends data results and discussion:**

The PIC trends data has shown a significant improvement at Golden Sands Slough. At the start of the segmented sampling in 2015, bacteria results for fecal coliform were in the thousands. Golden Sands Slough was then chosen as the first PIC focus area for segmented sampling (2015-2017). Since then the bacteria numbers have dropped considerably. In 2017 Golden Sands geomean was over twice the TMDL set standard of 19. Today the geometric mean is under the TMDL standard, and in addition it is currently meeting the 90th percentile criteria of 100fc/100mL. This improvement is likely due to the continuous work Clallam County and partners have been doing in the last several years. Various non-conforming sewage systems were upgraded to permitted septic systems and Clallam Conservation District's cost-share program helped some homeowners make needed repairs. While there is improvement in water quality there is still work to be done that remains unfunded.

Segmented sampling on Meadowbrook slough continued to show high levels of bacteria in 2017. Clallam County Environmental Health confirmed two failing septic systems with the use of tracer dye testing. In January 2018 one of those failures was repaired and the second failure was fixed late summer of 2018. The Trends data is showing that Meadowbrook slough 0.23 is still failing geomean as well as a big increase in 90th percentile. This data may not be reflecting recent septic repairs made and a high result back in March, June, and August of 2018 may be driving the numbers up. Additional septic inspections continue as well as monitoring.

Trends data is showing that nearly all of the sampling sites are meeting state standards. Bell creek had a high result in October 2018, follow up sampling was done that station is now showing low numbers.

- **PIC Segmented Data results and Discussion**

Matriotti Creek and Meadowbrook slough are the only two PIC trends stations that are failing to meet the fecal coliform set criteria. The focus area for 2018-2019 is Matriotti and Lotzgesell creek and work is continuing in Meadowbrook slough and Golden Sands slough. Three stations on Matriotti creek have been defined as a hot spot and while funding is available segmented sampling in those areas will continue.

- **PIC Nutrient Results**

The Tribe started a nutrient monitoring program in 2009 and has been sampling quarterly at 4 freshwater sites in the Blyn Watershed until late 2015 when the PIC trends monitoring teams began their monthly monitoring. The following table displays PIC nutrient data from 2015-2017. According to the State-EPA Nutrient Innovations Task Force (EPA 2009), nutrient pollution ranks as one of the top causes of surface water quality impairment in the United States. Nutrients are chemical compounds that contain nitrogen and phosphorus. Both these compounds are essential nutrients for plant growth but in high concentration they can become

a contaminant. Nutrient over enrichment can cause a host of problems in both fresh and marine waters. Harmful algal blooms, fish kills, eutrophication, outbreaks of shellfish poisoning, and hypoxia/anoxia are all related to elevated nutrients. This is a serious concern for JCL and Dean Creek due to their location being so close to the intertidal area in which we grow shellfish and practice treaty harvest. Washington State has not developed water quality criteria for nutrients in streams or estuaries.

Table 5. Nutrient results from PIC trends sites

Parameter	Min Value	Max Value	Average	Sample Count
Bell Creek 0.2				
Ammonia (NH3) as Nitrogen (N)-ug/L	6.73	39.70	17.28	13
Nitrate as N-ug/L	779.34	3663.37	2586.38	13
Nitrite as N-ug/L	3.01	12.68	6.67	13
Phosphate as P-ug/L	70.69	465.64	179.11	13
Silicate as Si-ug/L	6216.43	9237.85	7788.20	13
Total Persulfate Nitrogen-ug/L	2464.22	5105.70	3972.83	13
Total Persulfate Phosphorus-ug/L	103.88	636.61	272.72	13
Cassalery Creek 0.0				
Ammonia (NH3) as Nitrogen (N)-ug/L	0.04	51.31	22.05	6
Nitrate as N-ug/L	945.28	1239.11	1090.63	6
Nitrite as N-ug/L	1.75	6.10	3.86	6
Phosphate as P-ug/L	2.00	31.31	13.72	6
Silicate as Si-ug/L	4752.37	6590.30	5961.94	6
Total Persulfate Nitrogen-ug/L	1345.58	1997.72	1685.27	6
Total Persulfate Phosphorus-ug/L	30.16	61.05	38.50	6
Cassalery Creek 0.6				
Ammonia (NH3) as Nitrogen (N)-ug/L	7.05	42.25	21.88	7
Nitrate as N-ug/L	647.24	1287.69	996.08	7
Nitrite as N-ug/L	2.16	8.09	4.59	7
Phosphate as P-ug/L	3.84	14.92	9.28	7
Silicate as Si-ug/L	6041.85	6921.69	6436.55	7
Total Persulfate Nitrogen-ug/L	1178.80	1875.99	1449.43	7
Total Persulfate Phosphorus-ug/L	27.56	58.02	39.99	7
Cooper Creek 0.1				
Ammonia (NH3) as Nitrogen (N)-ug/L	20.14	431.01	74.79	13
Nitrate as N-ug/L	16.44	368.00	145.99	13
Nitrite as N-ug/L	0.66	10.90	3.28	13
Phosphate as P-ug/L	15.94	95.35	32.27	13
Silicate as Si-ug/L	1261.36	8178.98	5911.73	13
Total Persulfate Nitrogen-ug/L	288.47	1799.97	539.54	13
Total Persulfate Phosphorus-ug/L	41.58	229.13	70.01	13

Parameter	Min Value	Max Value	Average	Sample Count
Dungeness Rv. 0.7				
Ammonia (NH3) as Nitrogen (N)-ug/L	0.04	20.81	7.76	13
Nitrate as N-ug/L	26.20	118.58	60.28	13
Nitrite as N-ug/L	0.01	0.87	0.32	13
Phosphate as P-ug/L	1.13	10.26	4.55	13
Silicate as Si-ug/L	2400.19	4246.13	3312.68	13
Total Persulfate Nitrogen-ug/L	70.75	352.22	168.95	13
Total Persulfate Phosphorus-ug/L	6.90	127.90	28.37	13
Golden Sands Slough 0.0				
Ammonia (NH3) as Nitrogen (N)-ug/L	12.67	338.25	102.95	13
Nitrate as N-ug/L	0.42	326.86	85.78	13
Nitrite as N-ug/L	0.48	14.20	3.55	13
Phosphate as P-ug/L	28.83	452.37	103.27	13
Silicate as Si-ug/L	659.11	8470.67	3727.57	13
Total Persulfate Nitrogen-ug/L	383.51	2990.83	1022.12	13
Total Persulfate Phosphorus-ug/L	60.79	547.03	175.52	13
Jimmycomelately 0.15				
Ammonia (NH3) as Nitrogen (N)-ug/L	2.06	43.72	16.93	13
Nitrate as N-ug/L	91.50	784.38	224.85	13
Nitrite as N-ug/L	0.67	4.03	1.45	13
Phosphate as P-ug/L	9.69	34.91	20.35	13
Silicate as Si-ug/L	6509.77	9799.27	8463.30	13
Total Persulfate Nitrogen-ug/L	243.12	1582.92	506.26	13
Total Persulfate Phosphorus-ug/L	35.97	162.26	62.55	13
Johnson Creek 0.0				
Ammonia (NH3) as Nitrogen (N)-ug/L	0.04	41.03	8.22	13
Nitrate as N-ug/L	58.17	319.95	217.38	13
Nitrite as N-ug/L	0.50	3.95	1.65	13
Phosphate as P-ug/L	28.44	82.14	45.48	13
Silicate as Si-ug/L	4662.92	10463.20	8312.22	13
Total Persulfate Nitrogen-ug/L	208.41	1319.98	601.52	13
Total Persulfate Phosphorus-ug/L	49.87	226.83	92.92	13
Lotzgesell0.1				
Ammonia (NH3) as Nitrogen (N)-ug/L	4.85	54.34	18.93	13
Nitrate as N-ug/L	823.81	1920.74	1627.89	13
Nitrite as N-ug/L	2.94	6.30	4.21	13
Phosphate as P-ug/L	7.07	15.38	10.10	13
Silicate as Si-ug/L	6841.09	8643.75	8042.05	13
Total Persulfate Nitrogen-ug/L	1642.79	2594.95	2186.14	13
Total Persulfate Phosphorus-ug/L	26.26	61.63	43.53	13

PIC Water Chemistry Results

The parameters; dissolved oxygen, pH and turbidity were all compared against the state water quality standards. The maximum, minimum and mean value were calculated (Table 6). These data are from 2017-2018. *Extraordinary Aquatic Life* criteria (WAC 173-201A-200) apply to these waters. Temperature criteria is the only parameter that wasn't compared to State water quality standards. State standards require continuous data collection to calculate a 7-day average daily max (7-DAD Max). Current monitoring is instantaneous grab samples only providing a snap shot in time, not a 7-DAD Max.

The criteria require that the dissolved oxygen not drop below 9.5 mg/L at a frequency of more than once every 10 years. Nine stations of the 22 being monitored for DO failed to meet that standard. Five of those nine stations are often brackish waters due to their proximity to the marine water influence, which could explain some of the lower values. The pH criteria was met at all monitoring locations. Turbidity failed at 4 monitoring sites, coincidently the highest turbidity results were after Sequim received an inch of rainfall in 72 hours of rainfall.

Table 6. PIC Trends and Water Chemistry – Straits and Dungeness Watershed

Parameter	Max. Value	Min. Value	Mean	Sample Count	Standard Met?
Agnew Creek/Ditch 0.3					
Temperature C	15.2	5.7	10.16	5	
DO mg/L	12.1	8.8	10.66	5	No
pH	7.95	7.75	7.88	4	Yes
Turbidity	11	1.5	6.43	5	Yes
Bagley Creek 0.7a					
Temperature C	13.6	5	8.97	5	
DO mg/L	12.6	10	11.41	5	Yes
pH	8	7.7	7.87	4	Yes
Turbidity	16	1	7.57	5	Yes
Bell Creek 0.2					
Temperature C	13.6	3.8	9.87	15	
DO mg/L	12.8	9.7	10.71	15	Yes
pH	8.4	7.9	8.1	12	Yes
Turbidity	26	2	5.6	15	Yes
Cassalery Creek 0.0					
Temperature C	13.9	9.1	12.26	8	
DO mg/L	10.1	9.4	9.66	8	Yes
pH	8	7.7	7.86	8	Yes
Turbidity	5.00	1	3.375	8	Yes
Cassalery Creek 0.6					
Temperature C	13.1	4.9	8.47	7	
DO mg/L	12.1	9.4	10.5	7	Yes
pH	8.1	8	8.03	4	Yes
Turbidity	5.7	2	2.67	7	Yes
Cooper Creek 0.1					
Temperature C	17.2	3.4	11.5	15	
DO mg/L	9.8	5.7	6.97	15	Yes
pH	7.5	7.1	7.3	12	Yes
Turbidity	11	0.9	3.53	15	Yes
Chicken Coop 0.24					
Temperature C	13.8	5.8	8.86	5	
DO mg/L	12.5	10.1	11.42	5	Yes
pH	8.1	7.8	7.98	4	Yes
Turbidity	34.5	1	9.3	5	Yes

Parameter	Max. Value	Min. Value	Mean	Sample Count	Standard Met?
Dean Creek 0.17					
Temperature C	6.6	6	6.3	3	
DO mg/L	12.6	12	12.3	3	Yes
pH	8	7.8	7.9	3	Yes
Turbidity	41	17	29	3	Yes
Dungeness River 0.7					
Temperature C	15	3.6	8.84	15	
DO mg/L	13.5	10.6	11.69	15	Yes
pH	8.4	8	8.16	12	Yes
Turbidity	41	0	8.21	14	Yes
Gierin Creek 1.8					
Temperature C	14.4	6.1	9.54	5	
DO mg/L	11.6	9.9	10.76	5	Yes
pH	8	7.9	7.98	4	Yes
Turbidity	7	2	5	5	Yes
Golden Sands Slough 0.0					
Temperature C	21	7.8	13.79	13	
DO mg/L	11.7	0.1	7.09	13	No
pH	8.2	7.1	7.85	13	Yes
Turbidity	110	1	12.92	11	No
Hurd Creek 0.2					
Temperature C	11	8.5	9.72	5	
DO mg/L	10.2	9	9.44	5	No
pH	7.4	7.3	7.38	4	Yes
Turbidity	1	0	0.8	5	Yes
Jimmycomelately 0.15					
Temperature C	13.6	2.5	8.62	15	
DO mg/L	13.6	9.6	11.16	15	Yes
pH	8	7.7	7.87	12	Yes
Turbidity	103	1	12.82	15	No
Johnson 0.0					
Temperature C	13.8	2.1	8.78	14	
DO mg/L	14	10.3	11.52	15	Yes
pH	8.3	7.9	8.18	12	Yes
Turbidity	289	1	24.71	15	No

Parameter	Max. Value	Min. Value	Mean	Sample Count	Standard Met?
Lotzgesell 0.1					
Temperature C	13	6.7	10.44	15	
DO mg/L	11	8	9.55	15	No
pH	8	7.6	7.76	12	Yes
Turbidity	12	3	6.88	15	Yes
Matriotti 0.3a					
Temperature C	13.7	5.4	9.87	15	
DO mg/L	12	8.3	9.81	15	No
pH	8	7.4	7.76	13	Yes
Turbidity	12	5	8.53	15	Yes
McDonald 0.16					
Temperature C	14.9	4.2	8.58	5	
DO mg/L	12.8	10.2	11.76	5	Yes
pH	8.2	7.6	7.9	5	Yes
Turbidity	16	1	8	5	Yes
Meadowbrook 0.2					
Temperature C	17.7	4.8	11.44	15	
DO mg/L	35.35	6.6	9.55	15	No
pH	7.8	7.4	7.55	12	Yes
Turbidity	14	1.4	3.96	15	Yes
Meadowbrook Slough 0.23					
Temperature C	14.3	5.8	10.27	15	
DO mg/L	9.8	2.7	6.79	15	No
pH	7.8	7.2	7.54	12	Yes
Turbidity	10	1	3.19	15	Yes
No Name 0.03					
Temperature C	17	5.8	10.52	5	
DO mg/L	12.3	9.2	10.9	5	No
pH	8	7.6	7.83	5	Yes
Turbidity	32	5	17.6	5	Yes
Sequim Bay State Park Creek					
Temperature C	13.9	2.8	9.35	14	
DO mg/L	13.7	1.5	9.31	14	No
pH	8.1	7.2	7.83	11	Yes
Turbidity	114	0	11.84	14	No
Seibert 1.0					
Temperature C	14.9	4.3	9.08	5	
DO mg/L	12.8	10.3	11.7	5	Yes
pH	8.3	7.7	8	4	Yes
Turbidity	22	0	7.6	5	Yes

Final Comments and Future Programs

For cultural and economic reasons, it is essential that the traditional foods of the Tribe are still available and harvested. For this reason, the Tribe works to enhance and protect our natural resources to meet the needs of current and future generations. The Tribe's Social Services Department was proud to launch its first Traditional Foods Program in 2018. Funded from the Centers for Disease Control and Prevention, a division of the U.S. Department of Health and Human Services. The purpose of the grant is to support Tribal practices that build resiliency and connections to community, family, and culture, which over time, can reduce risk factors for chronic disease among American Indians and Alaska Natives. Jamestown S'Klallam Tribe will use traditional foods as the framework to address these three strategies:
1) Cultural teachings about traditional healthy foods to promote health, sustenance, and sustainability
2) Seasonal cultural and traditional practices that support health and wellness
3) Traditional and contemporary physical activities that strengthen wellbeing.

The Jamestown S'Klallam Tribes Clean Water Act 106 program helps support this program by providing staff to preform water sampling to help keep our shellfish areas classified and safe for subsistence harvest. The program also provides training opportunities for staff, enhancement of Tribal aquaculture and protection of Treaty resources.

It is our hope to continue to monitor our streams, rivers and bays within the Tribe's U&A and restore and enhance our Natural Resources.

The intent of the following maps is to show the Tribes primary area in the JST U&A, display the planning areas for both Sequim and Dungeness Watersheds and show the PIC monitoring stations.

Tables 7 displays the miles of watershed that have been assessed by JST as well as square miles of estuaries assessed.

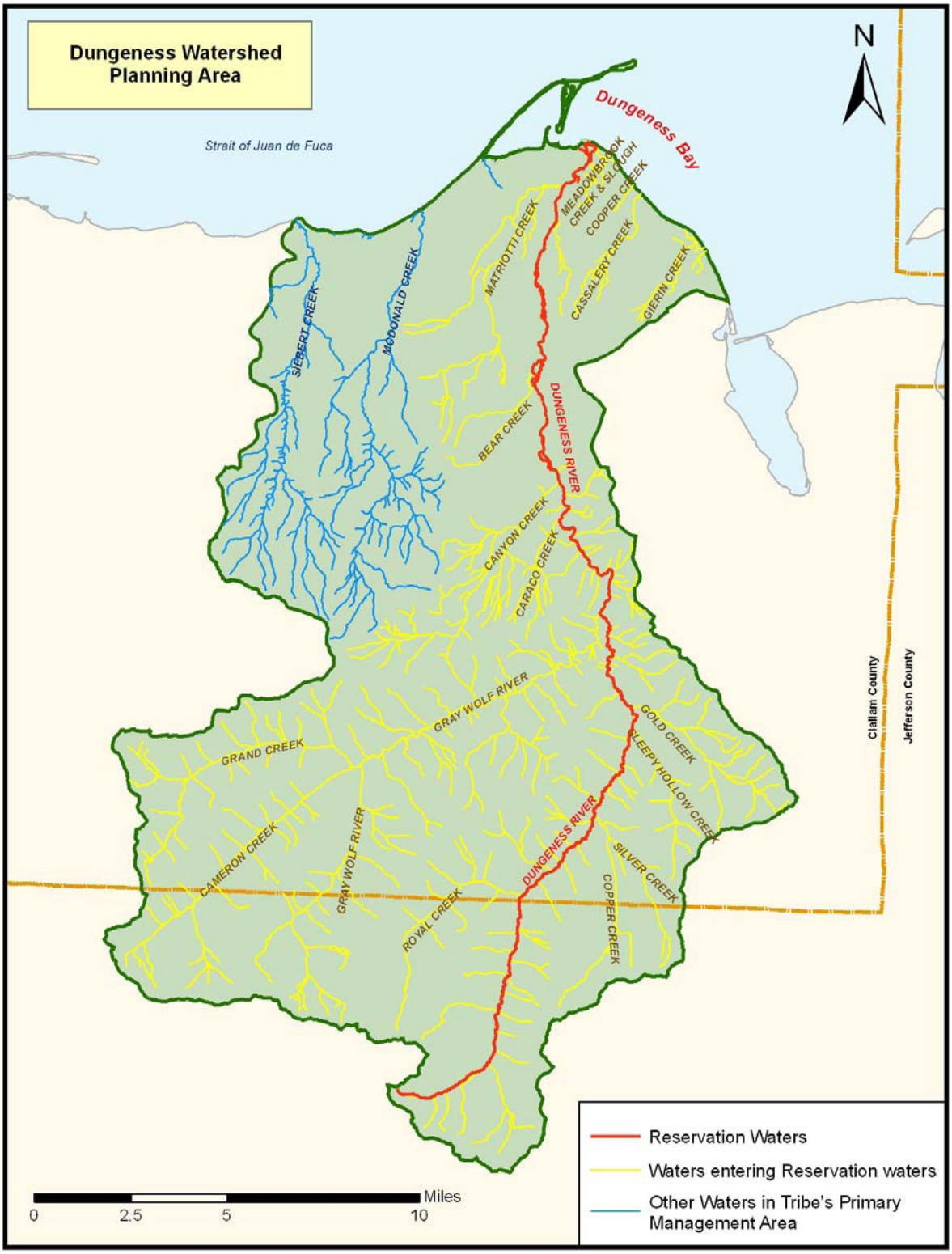
Table 8 includes the parameters measured and what designated use they support, criteria and citation.

Table 9 and 10 display the designated use targets for both Sequim and Dungeness Bay watersheds and Table 11 explains if the waterbody is meeting the designated use for primary contact and if not in full support, what the limiting factors are.

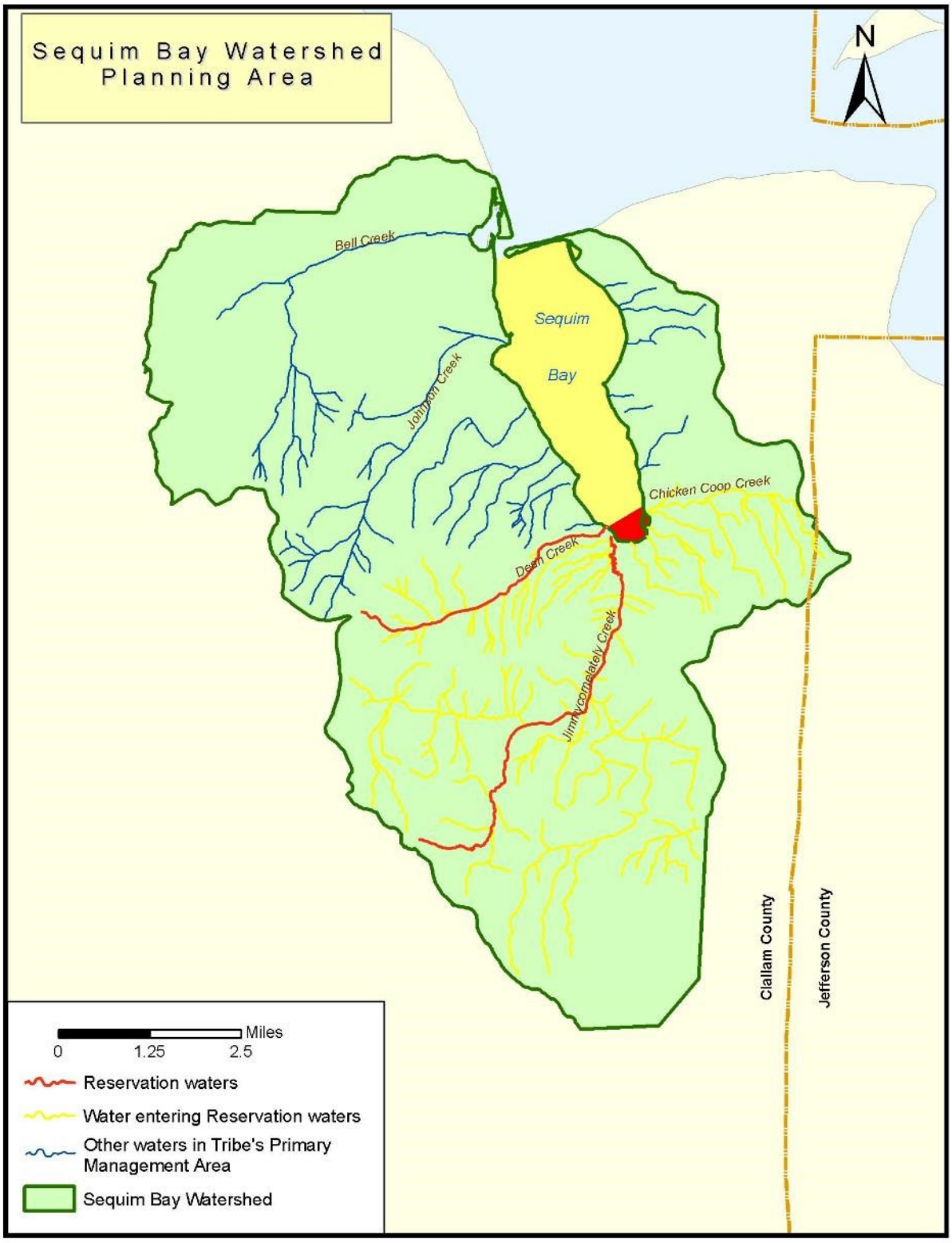
The Water Quality Standards for Surface Waters of the State of Washington were used as guidance. The designations for water bodies are listed in WAC 173-201A600 and 173-201A-602.

Map 2. Jamestown S'Klallam Primary Area inside JKT U&A

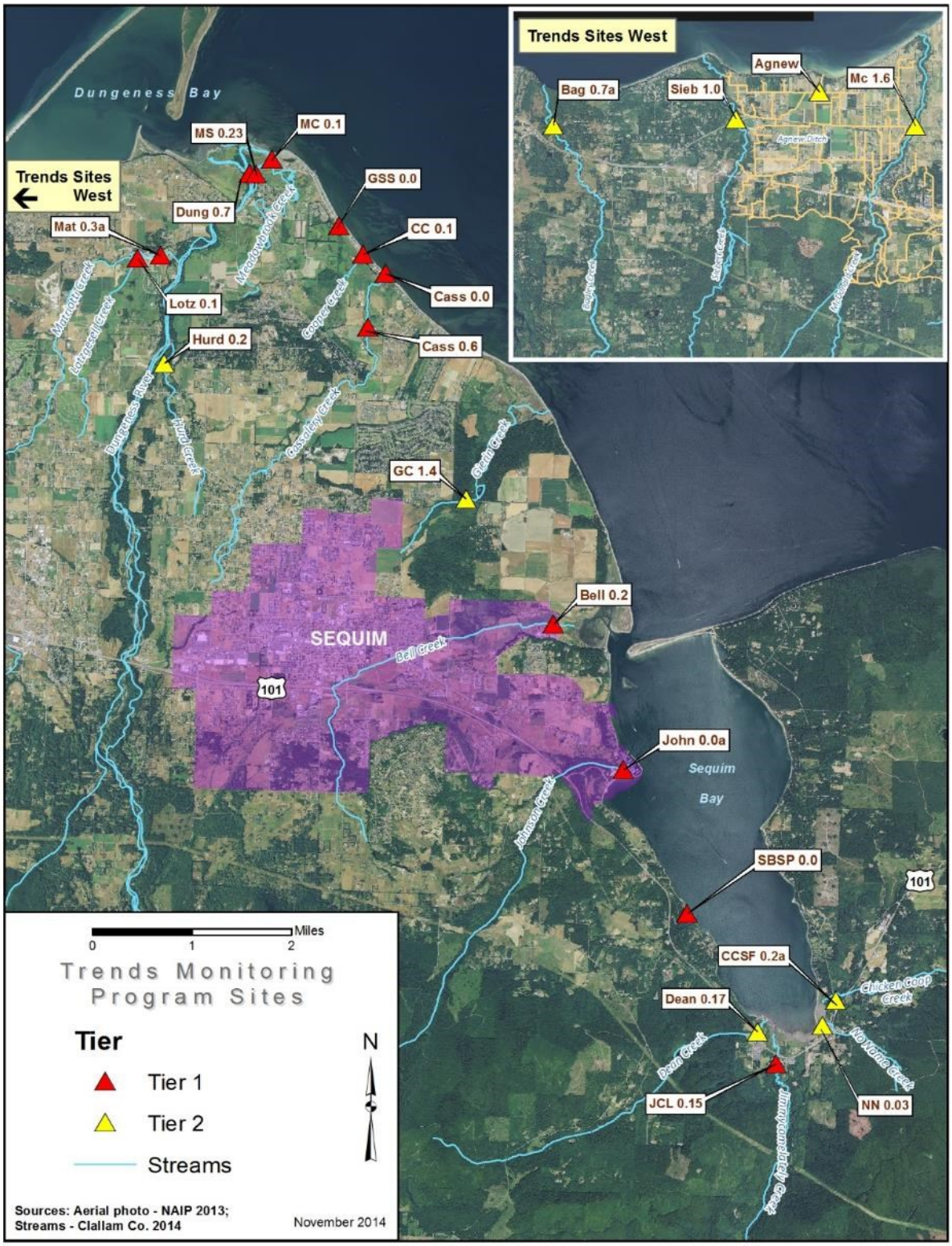
Map 3. Dungeness Watershed Planning Area



Map 4. Sequim Bay Planning Area



Map 5. PIC Monitoring Sites: Tier 1 sites are monthly; Tier 2 sites are monitored quarterly.



Map 6. PIC segmented monitoring sites.

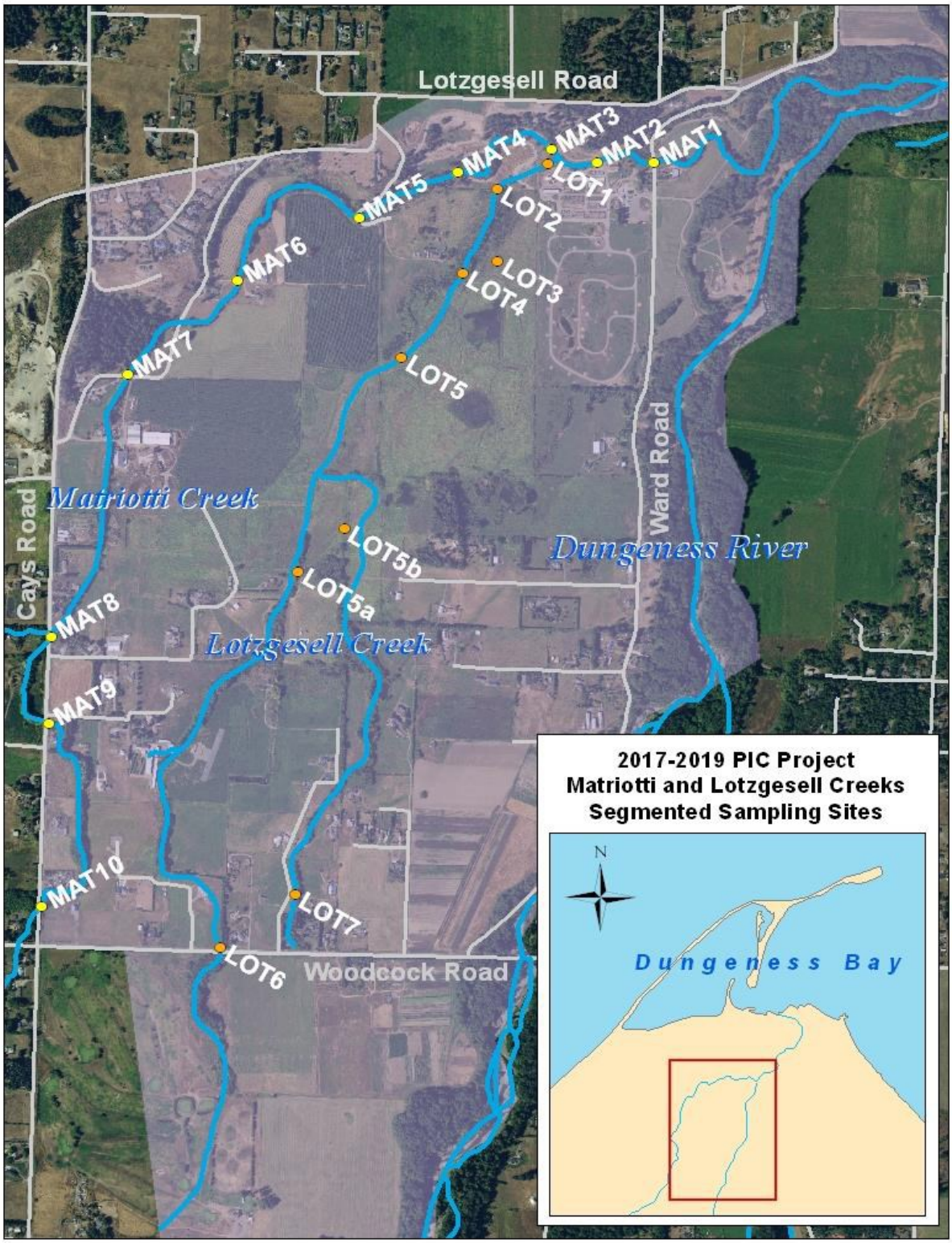


Table 7. Atlas of Tribal Waters

ATLAS OF TRIBAL WATERS		
Waterbody name	**Total Miles**	**Miles Assessed**
Bell Creek	4.8	4.2
Dean Creek	4	0.22
Dungeness River	31.9	11
Chicken Coop Creek	1.3	0.18
Golden Sands Slough	1	0.05
Lotzgesell Creek	3.79	0.06
Matriotti Creek	9	6
Meadowbrook Creek	3.2	2
Meadowbrook Slough	0.46	0.2
No name creek	0.53	0.03
Jimmycomelately Creek	19	0.68
Johnson Creek	7.4	0.1
Total Stream Miles	**86**	**25**
% Stream Miles Assessed		**23**
Total number of estuary square miles		
Dungeness River Estuary/Rivers End Rd.	10	10
Jimmycomelately Creek Estuary	1	1
Dean Creek Estuary	1	1
Total Estuary Miles	**12**	**12**

Table 08. Designated use benchmarks for water quality criteria

Parameter	Designated Use	Benchmarks/Criteria	Citation
pH	Aquatic life	6.5 - 8.5	Washington State DOE
Temperature	Aquatic life Salmonid Spawning	7-day max 12c	Washington State DOE
Dissolved Oxygen	Aquatic life	Lowest 1-day min. 8.0 mg/L	Washington State DOE
Turbidity	Aquatic life	Not to exceed 5 over background of 50	Washington State DOE
Nutrients	Aquatic life	Numeric criteria not established for DOE. JKT uses upstream value for reference Dun11.0	
Fecal coliform	Extraordinary Primary Contact Recreation	Geometric mean value of 50/100mL	Washington State DOE
Macroinvertebrates	Aquatic life	IBI Score of 35	Clallam County Streamkeepers
Habitat	Aquatic life	TFW analysis protocol	TFW 1994

Table 09. Sequim Bay watershed designated use targets

Tribal Goals for Waters in Sequim Bay Watershed					Designated Use	
Waterbody Name	Aquatic life use	Core Summer Habitat	Recreation use	Salmonid Spawning	Salmonid Migration	Salmonid Rearing
Chicken Coop Creek	X	X	X	X	X	X
Jimmycomelately Creek	X	X	X	X	X	X
No Name Creek	X	X	X			
Dean Creek	X	X	X		X	X
Johnson Creek	X	X	X		X	X
Bell Creek	X	X	X		X	X

Table 10. Dungeness Bay watershed designated use targets

Tribal Goals for Waters in Dungeness Bay Watershed					Designated Use		
Creek name	Aquatic life use	Char Spawning/Rearing	Core Summer Habitat	Rec. use	Salmonid Spawning	Salmonid Migration	Salmonid Rearing
Dungeness River	X	X	X	X	X	X	X
Matriotti Creek	X		X	X	X	X	X
Meadowbrook Creek	X		X	X	X	X	X
Meadowbrook Slough	X		X	X			
Lotzgesell Creek	X		X	X	X	X	X
Golden Sands Slough	X		X	X			

Table 11. Designated Uses for Dungeness and Sequim Bay Watersheds.

Site	Designated Uses	Use Support Decision	Parameter Limiting Full Support
Agnew Ditch	Primary Contact	Not Full Support	Fecal Coliform
Bagley Creek	Primary Contact	Full Support	
Bell Creek	Primary Contact	Not Full Support	Fecal coliform
Cassalery Creek	Primary Contact	Full Support	
Chicken Coop Creek	Primary Contact	Full Support	
Cooper Creek	Primary Contact	Not Full Support	Fecal coliform
Dungeness River	Primary Contact	Full Support	
Gierin Creek	Primary Contact	Full Support	
Golden Sands Slough	Primary Contact	Not Full Support	Fecal coliform, D.O., Turbidity
Hurd Creek	Primary Contact	Not Full Support	D.O, Turbidity
Jimmycomelately Creek	Primary Contact	Not Full Support	Fecal coliform, Turbidity
Johnson Creek	Primary Contact	Not Full Support	Turbidity
Lotzgesell Creek	Primary Contact	Not Full Support	Fecal coliform, D.O.
Matriotti Creek	Primary Contact	Not Full Support	Fecal coliform, D.O.
McDonald Creek	Primary Contact	Full Support	
Meadowbrook Creek	Primary Contact	Not Full Support	Fecal coliform, D.O.
Meadowbrook Slough	Primary Contact	Not Full Support	Fecal coliform, D.O.
No Name Creek	Primary Contact	Not Full Support	D.O.
Seibert Creek	Primary Contact	Full Support	
Sequim Bay State Park	Primary Contact	Not Full Support	D.O., Turbidity

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EPA Region 10

Jamestown S'Klallam Tribe
EPA-Tribal Environmental Plan
FY21-

I. Tribal Programs and Priorities

Forward:

> *"The Jamestown S'Klallam Tribe seeks to be self-sufficient and to provide quality governmental programs and services to address the unique social, cultural, natural resource and economic needs of our people. These programs and service must be managed while preserving, restoring and sustaining our Indian heritage and community continuity."*
>
> *Mission Statement of the Jamestown S'Klallam Tribe*

For ten thousand years, a nation of people lived and prospered on these lands of the Olympic Peninsula. These strong people of the S'Klallam tribes had a system of governance, engaged in commerce, managed natural and human resources, and exercised power over their territorial boundaries. The people created a rich culture of art, song, spirituality, traditional knowledge and social structure. They promoted leadership, self-sufficiency, self-reliance, and a code of conduct within their community that served as a basis for strength, pride and survival. This was a nation, a government and a community, independent and interdependent. It still is. (Interim Comprehensive Plan, Jamestown S'Klallam Tribe, 2016)

The Jamestown S'Klallam Tribe has evolved directly from several constituent communities of the S'Klallam people. The S'Klallam Tribe, whose name means the "Strong People," belong to a Salish cultural and linguistic group related to British Columbia Tribes as well as to most Tribes in the Puget Sound area.

The present-day S'Klallam Tribe is distinctly divided into three separate bands - the Jamestown S'Klallam Tribe, the Lower Elwha Klallam Tribe and the Port Gamble S'Klallam Tribe. Although the Jamestown S'Klallams were signatories to the Treaty of Point No Point in 1855, they did not establish a formal reservation. Their refusal to move to the Skokomish Reservation, as called for in the treaty, was the result of unfriendly relations with these southern neighbors. The S'Klallams were determined to remain at their traditional fishing areas on the Olympic Peninsula near present day Sequim, Washington. After 1870, white settlers in the Washington Territory began to bring pressure upon the Bureau of Indian Affairs to move all treaty Indians to reservations. Without clear title to the land they lived on, many Indians were easily and frequently dispossessed. By 1874, a band of S'Klallams under the leadership of Lord James Balch (whose father was a signatory to the 1855 treaty) raised enough money to pay $500 for a 210-acre tract near Dungeness, Washington Territory. This was the start of the Jamestown S'Klallam community. Located approximately seven miles north of downtown Sequim along the Strait of Juan de Fuca, Jamestown is the historic settlement of the ancestors of the S'Klallam Tribe. Jamestown is located near the mouth of the Dungeness River, traditionally the major fishery for the local S'Klallam people. (Interim Comprehensive Plan, Jamestown S'Klallam Tribe, 2016)

Program Priority: Protect and enhance the natural resources of the Jamestown S'Klallam Tribe.

1) Priority Description:

The Jamestown S'Klallam Tribe has an extremely close and long-lasting relationship with its natural resources. Jamestown people have fished, hunted and gathered across the Olympic Peninsula landscape for thousands of years. Our usual and accustomed fishing areas stretch from the mouth throughout the length of the Strait of Juan de Fuca, the San Juan Islands, Admiralty Inlet and Hood Canal (Map 1). Historically, Jamestown has been dependent on the wise use and proper management of its natural resources. Today, that dependency and care in management continues even as we increase our economic development.

In modern times the relationship between the Jamestown S'Klallam Tribe and our natural resources has been framed by a treaty with the United States. In 1855 the Jamestown Tribe ceded millions of acres of land to the government while reserving rights to the natural resources on that land and in local waters, including both surface and ground water

resources. Water rights are included in the property rights retained by treaty. Today we share these resources with other Tribes and the State of Washington.

The Jamestown S'Klallam Tribe has maintained the right to fish, shellfish, hunt and gather, but that right is empty if there are no fish to catch, no clams to dig, no elk to hunt or berries to gather. Therefore, a program priority is the protection and enhancement of the natural resources within the Jamestown Tribe's Usual and Accustomed Area (See Map 1 below).

2) Long-term Environmental Program Development Goals for the Priority:

Our greatest natural resource concern is that the environment these natural resources live in and the habitat that supports healthy populations be protected. If threatened with harm, the environment must be protected and kept in a highly productive state. If damaged, the habitat must be restored so that fish and wildlife may prosper. If natural resources are in decline, they must be improved so that future populations may thrive.

When we have healthy, sustainable resources we have harvest opportunities. Harvest is important to Tribal citizens, to benefit economically from commercial harvests, to put food on our tables as a result of subsistence harvest and to have access to traditional resources for cultural purposes and for ceremonies.

Land and water, and the resources within, are a source of self-sufficiency for every nation. Land is a resource on multiple dimensions: it can provide habitat to protect and restore Treaty hunting and fishing rights; it can be an economic resource; and it is a cultural resource because Tribal lifeways and traditions are closely tied to land and water. (JST Comprehensive Plan)

A step the Tribe has taken to protect these resources has been incorporating climate change into our planning efforts and operations. A related long-term goal is to reduce risks associated with climate change impacts and improve resiliency of high priority resources (Adaptation International, August 2013). As such, our 2013 Climate Vulnerability Assessment and Adaptation Plan prioritizes areas of concern and incorporates actions to increase resilience.

A Tribe is truly sovereign when it has control and jurisdiction over its lands. A long-term environmental goal for Jamestown Tribe is to have jurisdiction of its homeland land and waters.

3) Intermediate Program Development Milestones toward the Long-term Goals:

Jamestown S'Klallam Tribe has developed two watershed-based plans for the two primary watersheds of the Tribe: Protecting and Restoring the Waters of the Dungeness (July 2007, approved by EPA) and Protecting and Restoring the Waters of Sequim Bay (December 2014, approved by EPA). These plans have milestones for implementation and measurable criteria for evaluating progress presented as Tables in Section 8, Watershed Milestones and Schedule for Implementation (Appendix A and B), and are incorporated as Development Milestones toward our Long-term Goals.

The Tribe has long recognized that working collaboratively with other organizations is the best way forward. The Dungeness River Management Team (DRMT) is a "*A partnership of individuals and stakeholders working together to develop and pursue implementation of locally based, long-term solutions to Dungeness Watershed management issues."* For over 30 years the members of DRMT, have worked to identify, and resolve issues affecting the health of the Dungeness watershed and the species which depend on a healthy watershed. Over the years, DRMT has formed several sub-committees to tackle specific challenges. Sub-committees include, Dungeness River Restore Work Group and Dungeness Clean Water Work Group. Conservation and restoration of salmon and shellfish habitats as well as improving water quality necessary for salmon and shellfish to thrive are cornerstones of DRMT efforts. Recommended Restoration Projects for the Dungeness River (1997) and Recommended Land Protection Strategies of the Dungeness Riparian Area (2003) still provide an important framework for the past, present, and future work of the DRMT and the Tribe.

Further, Jamestown S'Klallam and other Puget Sound tribes have engaged in an intensive coordination process to identify priority actions needed to address the protection and restoration of Puget Sound. The following list of tribal priorities is included in the 2018-2022 ACTION AGENDA FOR PUGET SOUND. Actions in **bold font** are of immediate and special significance to Jamestown Tribe, and so are incorporated as Development Milestones toward our Long-term Goals.

1. The Puget Sound Management Conference under the leadership of the Puget Sound Partnership (PSP) Leadership Council, the Ecosystem Coordination Board, and Salmon Recovery Council, supported by the PSP staff, will do the following to protect the ecosystem processes required to support the habitat necessary to meet salmon recovery goals of viable, harvestable populations.
    a. Establish quantitative metrics for habitat at each life history phase for each population to ensure harvestable surplus and a viable salmon population.
    b. **Identify necessary changes to Federal, State, tribal and local statutes, regulations and policies that allow the continued loss of habitat including, but not limited to, eliminating the single family and agricultural activity exemptions from the Shoreline Management Act and the Growth Management Act**.
    c. Implement and fund the recovery plans for Puget Sound salmon and steelhead (all H's)
    including, but not limited to, Puget Sound Chinook salmon and Strait of Juan de Fuca/Hood Canal summer chum salmon to support viable, harvestable populations.
    d. Modify Flood Control and Coastal Emergency Act (PL84-99) to provide funding for levee set- backs to enhance flood plain functions.
    e. Require all affected agencies to clearly identify, define, implement and enforce quantitative metrics for essential habitat required under existing authorities.
    f. Develop a comprehensive funding strategy for Puget Sound recovery with focus on new dedicated sources of funding.
    g. Develop a comprehensive public outreach, awareness, and behavior change program to promote public stewardship of Puget Sound resources.
    h. Prevent large oil spills and reduce the incidence of chronic oil spills through enforcement of existing rules and modify legislation where required to ensure protection.
    i. Adequately fund and strengthen spill readiness and response capacity.
    j. Update state water quality standards by ensuring promulgation of new human health criteria with an accurate fish consumption rate before undertaking implementation rule development and by developing numeric criteria of fine sediment.
    k. **Implement water resource management rules (establish instream flows) in critical watersheds**. [In 2013, WA Department of Ecology finalized the Instream Flow Rule for the Dungeness. Implementation of the rule is a work in progress].
2. Implement and improve consistency, coordination of enforcement and alignment of federal, state and local regulations for the protection of priority nearshore, estuary and floodplain habitat.
    a. The appropriate entities shall ensure effective coordination and enforcement of existing regulations.
        i. EPA will enforce CWA and ensure that delegated responsibilities to WDOE are effectively discharged.
        ii. WDOE will enforce Water Quality Standards and the State Water Pollution Control Act.

iii. **NOAA will ensure that the conditions of the DNR HCPs are met**.
iv. NOAA will monitor the implementation of the FEMA BIOP to ensure compliance.
v. WDOE will enforce water right permits, beneficial use requirements and illegal withdrawal regulations.
vi. WDFW will enforce Hydraulic Code provisions.
vii. WDNR will enforce Forest Fish Rules and commitments under HCPs.
viii. Federal and State agencies will act to ensure that habitat held in trust to guarantee reserved treaty rights supporting the tribal way of life is not degraded to the point that additional restrictions are required.
ix. Ensure that best management practices result in meeting water quality standards.

b. Where inconsistencies exist between current regulations and the desired ecosystem protection and restoration, the affected agencies will consult and align their authorities to achieve this objective.
c. Develop strategy to achieve zero discharge of wastewater into Puget Sound, including short- term targets by Action A rea identifying specific facilities for conversion.
d. Align Federal, State, and local agencies' resources and regulatory jurisdictions to implement large scale process restoring projects.
e. NOAA will develop a Biological Opinion on the impact of dikes/levees on Chinook production.
f. NOAA OCZM will ensure that the SMA protects shoreline processes essential to the productivity and capacity for harvestable viable salmon populations.

3. Increase opportunity, focus and effectiveness of incentive-based approaches, including non-financial incentives, for the protection and restoration of priority floodplain, wetland, estuary and nearshore habitat.
    a. Identify and prioritize key habitat.
    b. Protect key habitat through land purchase, conservation easements, purchase of development rights or tax incentives such as tax credits or reductions.
    c. Develop measurable standards that must be met by those applying for or receiving incentives.
    d. Develop regulations that allow continued land use consistent with protection and recovery targets, but make conversion to other uses prohibitive.
    e. Develop programs that recognize good stewards of key habitat and help them identify efficiencies, new markets, etc.
    f. Address key institutional, financial and community barriers to priority habitat restoration projects.
    g. Establish a sound wide taxing district to support actions, monitoring and adaptive management of Puget Sound protection and restoration projects.
    h. Implement a program to illustrate the value of a healthy Puget Sound Ecosystem to Public Health and the economic well-being of the residents.
    i. Streamline permitting requirements for ecosystem restoration projects with agreed long-term beneficial results.
    j. Overcome institutional barriers to align funding sources to implement large scale projects including implementation of projects identified by PSNERP.
    k. ESA Listing Services will ensure that federal agencies consult on actions that impact
    listed species.
4. Hatchery production will augment harvest and supplement natural stock restoration in a manner that is compatible with habitat protection and restoration, as well as

preserving and enhancing the genetic and life history diversity of natural production.

   a. **WDFW and tribal fishery resource managers will develop hatchery management plans that recognize the requirements in each watershed, take into account habitat and harvest plans, and provide for sustainable production from both hatchery and natural sources.**
   b. WDFW and Tribal fishery resource managers will complete Hatchery Genetic Management Plans (HGMPs) for NOAA review and approval.

5. Develop and implement monitoring programs critical to the evaluation of viable salmonid population parameters, key indicators of freshwater and marine habitat and ecosystem response to salmon recovery efforts which will be comparable in detail to monitoring harvest and hatchery practices.
   a. Apply the RITI Adaptive Management Framework throughout Puget Sound.
   b. Spawning ground abundance, smolt migration abundance and total abundance for natural and hatchery origin populations will be estimated.
   c. Monitor key habitat status and trends indicators for floodplain, channel migration zone, wetland, estuary, nearshore and Salish Sea habitat including stream flow, temperature, habitat extent and condition, prey and predator abundance and associated species complexes.
   d. Monitor effectiveness of restoration projects, best management practices and buffers.
   e. Establish geographically appropriate measures to evaluate actions (reach, drift cell, etc.).
   f. Monitor the implementation and effectiveness of regulations intended to protect salmon habitat and make changes as necessary.
   g. Implement a comprehensive Puget Sound marine salmonid survival study focused on management needs for associating key habitat indicators with returning abundances.

4) Brief Description of Tribe's plan to manage a program:

Jamestown Tribe desires to build its capacity so that it can be fully involved in the management of land and water that support its Treaty Resources. This capacity would include policy analysts to review and comment upon local, state and federal rules and/or action plans; and technical staff such as biologists, hydrologists, geologists and ecologists to review and comment upon permit actions and proposals and to be engaged in all of the work listed above.

5) Assistance needed:

The Tribe will require sustained financial and technical assistance to meet program goals and objectives. Cooperation and collaboration with EPA, other Federal agencies and state, local and tribal governments is also needed. Puget Sound recovery is underfunded and needs sustained and substantial federal funding to ensure the health of the second largest estuary in the U.S. and to ensure the protection of treaty resources.

Program Priority: Protect the Treaty Rights of the Jamestown S'Klallam Tribe.

1) Priority Description:

Jamestown S'Klallams were signatories of the Treaty of Point No Point in1855. Article 4 of the Treaty with the S'Klallam establishes what is commonly referred to as Treaty Rights: *The right of taking fish at usual and accustomed grounds and stations is further secured to said Indians, in common with all citizens of the United States; and of erecting temporary houses for the purpose of curing; together with the privilege of hunting and gathering roots and berries on open and unclaimed lands. Provided, however, that they shall not take shell-fish from any beds staked or cultivated by citizens.*

Jamestown Tribe's environmental program works to ensure the protection of Tribal Citizens' ability to fish, hunt and gather. This includes ensuring there is access to fishing, hunting and gathering grounds; providing co-management; and working to protect the limited resources available.

2) Long-term Environmental Program Development Goals for the Priority:

- Access to fishing, hunting and gathering grounds.
- Co-management authority and capacity to participate in local, state and federal management arenas.
- Protection of high-quality habitat, with an emphasis on freshwater and marine shoreline habitats.
- Self-sustaining, abundant populations of traditional fishing, hunting and gathering species.

3) Intermediate Program Development Milestones toward the Long-term Goals:

- Implement the North Olympic Peninsula Lead Entity for Salmon (NOPLE) Salmon Recovery Strategy.
- Secure access to hunting grounds (DNR/ Private timber MOA).
- Perform stock assessment and management of finfish and shellfish harvest.
- Participate in legal proceedings affecting the Tribe's treaty rights.

4) Brief Description of Tribe's plan to manage a program:

Work with the EPA to create a self-governance compacting and self-determination contracting funding mechanism for tribal environmental protection programs reflective of the federal-tribal trust relationship. This would provide tribes the flexibility to design programs to meet the needs of their communities, while increasing program efficiency and accountability.

5) Assistance needed:

The Tribe will require sustained financial and technical assistance to meet program goals and objectives. Cooperation and collaboration with EPA, other Federal agencies and state, local and tribal governments is also needed.

The homelands, waters, usual and accustomed areas, and traditional territories of each tribe in western Washington contain economically and culturally significant resources that are vital to tribal communities. However, the destruction of habitat and contamination of waters and foods have a direct, serious and substantial effect on the health and welfare of tribal people, their lands, treaty- reserved resources and political integrity. The principal objective of the requested program development and increase in funds is to further develop tribal environmental programs for the 21st century. Strategic program design includes funding development, program implementation, and alignment of authorities and resources to address the federal treaty trust responsibility of environmental protection and restoration critical to sustaining tribal people, lands, waters and resources on the reservation and throughout the usual and accustomed areas.

Program Priority: Protect and improve the fisheries (and hunting and gathering opportunities) of the Jamestown S'Klallam Tribe.

1) Priority Description:

Living in winter and summer villages on the Hood Canal and the Strait of Juan de Fuca, the Jamestown S'Klallam way of life evolved in tandem with the cycles of the salmon and seasonal bounty of the land. Virtually every fish-bearing stream and bountiful shellfish bed in the Tribe's "usual and accustomed" area were the locations that were chosen for seasonal or permanent habitation (Commemorating the 30th anniversary of Federal Recognition, 2011).

The ancestral river of the Jamestown S'Klallam Tribe is the Dungeness. Beginning with Captain

McAlmond's diking of the Dungeness estuary marshlands in 1855, a plethora of human impacts have seriously degraded Dungeness River salmon habitat. These impacts, which include water withdrawals, dredging, diking, riparian clearing, sediment impacts and the removal of logjams, have contributed greatly to the decline of Dungeness salmon and char. Marine shoreline modifications contribute further. The fishing rights of Jamestown S'Klallam and other Tribes have been rendered almost meaningless. Salmon populations have declined sharply because of the loss of spawning and rearing habitat. For example, the Dungeness Chinook are so reduced that harvest options have been eliminated. Treaty Rights At Risk (July 2011) describes the dismal state of salmon recovery and fisheries for Western Washington Treaty Tribes. For the past two decades Jamestown Tribe has worked to identify factors contributing to the decline of native stocks in the Tribe's primary watersheds and to improve habitat conditions.

2) Long-term Environmental Program Development Goals for the Priority:

Dungeness chinook escapement and productivity targets*:

- 4,700 escapement with a productivity of 1 adult return per spawner.
- 1,200 escapement with a productivity of 3 adult returns per spawner.

*Restoring the Dungeness: An Overview of the Dungeness River Restoration Strategy (2003).

North Olympic Peninsula Lead Entity for Salmon (NOPLE) Goals:

- Achieve fish stocks that are robust to changing conditions, self-sustaining over the long term, and capable of supporting ceremonial, subsistence, recreational and commercial fisheries.
- Implement actions in the salmon recovery plans to protect and restore fish habitat on the North Olympic Peninsula.
- Restore & maintain ecosystem function on the North Olympic Peninsula.
- Instill ecosystem awareness.
- Integrate efforts towards these goals with larger visions for overall salmon recovery and restoration of the Puget Sound ecosystem.

Goals of the Dungeness Chapter of Puget Sound Salmon Recovery Plan (2007)

1. Restoration of the lower river floodplain and delta to increase the quantity of essential rearing and salt/freshwater transition habitat.
2. Protection of existing functional habitat within the watershed.
3. Floodplain Restoration/Constriction Abatement (RM 2.6 -11.3) to alleviate channel constrictions, thereby increasing corresponding channel meanders and velocities, scour and bank erosion reducing gradient.
4. Water Conservation, Instream Flows, and Water Quality Improvement/Protection to improve summer low flows and alleviate water quality concerns.
5. Restoration of Functional Riparian and Riverine Habitat to improve the quality of riparian habitat and function, including temperature moderation, long-term recruitment of LWD, cover, food production, etc.
6. Large Woody Debris Placement.
7. Nearshore Habitat Protection and Restoration to improve the quantity and quality of estuarine and nearshore habitat.
8. Barrier Removal to address passage conditions.
9. Stock Recovery/Rehabilitation hatchery Reform.
10. Sediment Management/Source Control.

3) Intermediate Program Development Milestones toward the Long-term Goals:

The short-term nominal escapement goal for the Dungeness River is 925 chinook spawners, based on historical escapements observed in the 1970's and estimated production capacity re-assessed in the 1990's (Comprehensive Management Plan for Puget Sound Chinook: Harvest Management Component (2017)).

The escapement goal for all Strait of Juan de Fuca coho stocks combined is 9,000 adults (WDFW, Recovery Goals, 2015).

The status of the summer chum population in the Dungeness River is unknown due to a lack of historical or current population abundance data, and no thresholds were developed for this ninth extant population. A productivity recovery threshold of 1.6 recruits per spawner is proposed. This threshold is within a reasonable range of observed values and, when achieved, would accommodate liberalization of some restrictions on the harvest of salmon species commingled with summer chum salmon, while ensuring sustainability.(PNPTI and WDFW 2003) However, there have been less than 10 summer chum returning natural-origin spawners to the Dungeness (WDFW 2016). Beginning in 2018, stakeholders lead by the Tribe began development of a Dungeness River chum recovery framework.

Summer chum recovery goals for Jimmycomelately Creek have been met, however monitoring and ongoing adaptive management is warranted. For additional information related to the Jimmycomelately Creek Estuary Restoration Project can be found: https://jamestowntribe.org/natural-resources/reports-plans/jimmycomelately-creek-estuary-restoration/ .

4) Brief Description of Tribe's plan to manage a program:

The Tribe will continue to participate in State and Federal Fisheries management as co-manager. The Tribe will continue to participate in State management of hunting and gathering, pertaining to especially to access, but including other wildlife and vegetation management decisions that may affect Tribal hunting and gathering opportunities.

5) Assistance needed:

The Tribe will require financial and technical assistance to meet program goals and objectives. Cooperation and collaboration with EPA, other Federal agencies and state, local and tribal governments is also needed.

Map 1: Jamestown S'Klallam Tribe's Usual and Accustomed Area.

This map is for illustrative purposes only and should not be relied on for any purpose other than to ascertain the general area where the PNPTC member Tribes currently authorize fishing activities under the Boldt decision and the Treaty of Point No Point. Authoirzed areas of fishing can be subject to change and in no way should be considered to limit the treaty rights of the member Tribes.

II. EPA Programs & Priorities

EPA Region 10 Office of the Regional Administrator

The mission of the U.S. Environmental Protection Agency is to protect public health and the environment. We work to accomplish this through studying environmental issues, developing and enforcing regulations, publishing information, teaching people about the environment, sponsoring partnerships, and giving grants. EPA's Region 10 covers Alaska, Idaho, Oregon, and Washington and includes 271 federally recognized tribes. The Office of the Regional Administrator oversees the implementation of programs and the enforcement of environmental rules and regulations in the Pacific Northwest and Alaska. The Regional Administrator's Division includes the Public Affairs and Community Engagement Unit, the Tribal Trust and Assistance Unit, and Civil Rights and Equal Opportunity Employment functions.

Units & Programs	Priorities & Activities
Public Affairs & Community Engagement Unit Public Affairs Specialists communicate EPA's mission and efforts through the website, news and social media outlets. Coordinators work with communities and other agencies and partners, and assist EPA programs in engaging on clean-ups and other actions. The Environmental Justice and Children's Health programs work to promote EJ and children's health, to integrate protections into other programs, and to assist in evaluating issues.	• developing web/internet content and press releases • responding to public, press, and Congressional inquiries • coordinating on international issues and projects • coordinating outreach for clean-ups and other projects • providing information for healthy children, homes & schools • facilitating EJ work for tribes and indigenous peoples and connecting communities and programs • managing EJ and environmental education grants • providing training and technical assistance
Tribal Trust & Assistance Unit The United States has a unique relationship with and responsibility to federally recognized tribes. The Tribal Program works to assist other EPA programs in coordinating and consulting with tribes, and in partnering to address environmental issues and challenges. Tribal Coordinators work with tribes and consortia to build capacity to manage environmental protection programs.	• facilitating communication, coordination and consultation • supporting Government-to-Government relationships • managing IGAP and Performance Partnership grants • facilitating the development of EPA-Tribal Environmental Plans (ETEPs) • providing training and technical assistance • coordinating R10 Tribal Specialists Team • coordinating R10 Tribal Operations Committee
Civil Rights & Equal Opportunity Employment Region 10's Civil Rights and Equal Opportunity Employment Coordinator works to implement federal civil rights laws that protect employees and applicants for employment from discrimination and prohibit discrimination against members of the public by recipients of EPA funds.	• providing leadership, guidance, and assistance in carrying out the Agency's equal employment programs • providing technical assistance to regional program offices in carrying out responsibilities related to civil rights • providing technical assistance to regional program offices in complying with Equal Employment Opportunity (EEO) laws and regulations

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EPA Region 10: www.epa.gov/aboutepa/epa-region-10-pacific-northwest

EPA Region 10 Office of Water & Watersheds

Region 10's Office of Water and Watersheds (OWW) is responsible for carrying out EPA's mandates under the Clean Water Act and Safe Drinking Water Act. OWWs' mission is to restore, maintain, and enhance the overall quality of the Region's water resources in order to protect the health and diversity of the environment for present and future generations. Our environmental objectives are to: protect diverse ecosystems and ensure healthy watersheds; safeguard human health through vigorous protection of ground and surface waters and drinking water sources; prevent and minimize the discharge of pollutants to land, air, and water; and promote stewardship for the Region's waters through education and public involvement.

Units & Programs	Priorities & Activities
Drinking Water Oversees implementation of the Safe Drinking Water Act, which is the national law safeguarding tap water in America.	• implementing drinking water rules • direct implementation for the approximately 140 drinking water systems on tribal lands • conducting compliance and enforcement on drinking water systems on tribal lands • administering drinking water state revolving funds • administering tribal drinking water set-aside funds
Wastewater (NPDES) The National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating industrial, municipal, and other facilities that discharge pollutants via point sources, storm water, and sewer overflow discharges into waters of the United States.	• issuing NPDES permits, including: municipal, stormwater, industrial, oil & gas, concentrated animal feeding operations, pesticides, offshore seafood processing, and mining • directly implementing the NPDES permits program throughout ID, federal facilities in WA, and facilities on tribal lands within AK, WA, and OR • issuing NPDES permits in federal waters off the shores of AK, WA, OR • overseeing permitting in states which run approved NPDES programs (WA, OR, AK) and participating in development of an Idaho NPDES Program
Clean Water State Revolving Fund (CWSRF) Under EPA's Clean Water State Revolving Fund (CWSRF) program, each state maintains a revolving loan fund to provide low-cost financing for a wide range of water quality infrastructure projects, including: municipal wastewater treatment; nonpoint source protection; watershed protection or restoration; and estuary management projects.	• providing oversight and funding for the CWSRF programs administered by AK, ID, OR, and WA, including a focus on how to support climate resiliency

Watersheds Watersheds are areas that drain to a common waterway, such as a stream, lake, estuary, wetland, aquifer, or even the ocean. A watershed approach is the most effective framework to address many of today's water resource challenges.	• administering the Tribal NonPoint Source (319) Program • managing and overseeing state 319 grants in AK, WA, ID, and OR and supporting nonpoint source management • reviewing and acting on Integrated Reports / Impaired Waters (303(d)) Lists in AK, WA, ID, and OR • reviewing and acting on Total Maximum Daily Loads (TMDL) and providing technical support for TMDL development
Water Quality Standards Studies the effects of pollutants and uses this information to set protective standards for fresh surface waters and seawater.	• providing oversight on, and reviewing and approving or disapproving, state and tribal water quality standards actions • conducting tribal consultation and coordinating on state water quality standards • providing Clean Water Act Water Pollution Control Program (106) Grants so tribes can run water quality programs
Tribal Infrastructure Programs Helps ensure clean and safe water for the 271 federally recognized tribes and Alaska Native Villages in Region 10 by providing technical, funding, and other assistance.	• providing funding for drinking water and wastewater infrastructure projects identified as priorities in cooperation with Indian Health Service • supporting training and technical assistance in the operations and management of Alaska Native Village and rural community systems through a grant to the state of AK • supporting capacity development through cooperation with the state of AK Remote Maintenance Worker Program and the Rural Utility Business Advisor Program • providing training and technical assistance in the operations and management of systems to tribes in WA, ID, and OR through the drinking water direct implementation program
Puget Sound Puget Sound is one of the most ecologically diverse ecosystems in North America. EPA receives federal funding to protect and restore Puget Sound, most of which is used for financial assistance to state, local and tribal governments for efforts to implement the Puget Sound Action Agenda.	• directing funding to projects that protect treaty-reserved salmon and shellfish resources and their habitat • providing EPA Project Officer and technical monitor support for these Puget Sound Cooperative Agreements • supporting tribal engagement in the National Estuary Program Management Conference and overseeing the Puget Sound Partnership and integration of tribal priorities • co-leading the federal response to Western WA treaty tribes calling on the federal government to better protect treatyreserved resources ("Treaty Rights at Risk" whitepaper) • under a joint 'Statement of Cooperation' with Environment Canada, seeking to provide a forum for transboundary issues of concern to Coast Salish tribes and First Nations

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EPA Region 10 Office of Water & Watersheds: http://yosemite.epa.gov/R10/WATER.NSF/
EPA Office of Water: http://water.epa.gov/

EPA Region 10 Office of Air & Waste

Region 10's Office of Air and Waste (OAW) mission is to be a steward of the environment to protect air quality, control toxics, and manage waste. In coordination with partners, OAW provides technical, policy and monetary assistance to tribes, states, and local governments to build capacity for environmental management. This office implements program activities under these environmental laws: Clean Air Act (CAA), Resource Conservation and Recovery Act (RCRA), Pollution Prevention (P2) Act, and the Diesel Emissions Reduction Act.

Units & Programs	Priorities & Activities
Tribal Programs, Diesel and Indoor Air Unit The Tribal Programs, Diesel and Indoor Air Unit carries out regulatory air quality programs under the statutory authority of the Clean Air Act (CAA), tribal solid waste programs under the Resource Conservation and Recovery Act (RCRA), and diesel emissions reduction programs. This unit implements clean air and solid waste programs, including the Federal Air Rules for Reservations, on tribal lands, and also administers the Alaska tribal air quality program and the tribal indoor air program.	• implementing the Federal Air Rules for Reservations (FARR) in OR, WA, and ID • reviewing and acting on Treatment as a State applications • leading collaborations and providing technical assistance to support indoor air programs and initiatives in communities • coordinating with tribes, and other federal agencies that have roles, in implementing tribal air programs • convening partners, leveraging resources, and providing direct support to AK tribes to mitigate air issues • establishing partnerships around tribal priority issues such as PM2.5/wood smoke, solid waste, road dust, and asthma • developing tools and providing technical assistance and training to tribes for solid and hazardous waste programs • awarding and managing tribal air and Diesel Emission Reduction Act grants • providing assistance in developing and reviewing Integrated Waste Management Plans • awarding and managing tribal solid and hazardous waste grants, e.g. household hazardous waste grants
Air Planning Unit The Air Planning Unit develops designations for attainment and non-attainment of the National Ambient Air Quality Standards (NAAQS). This unit acts on state and tribal implementation plan submittals and develops federal implementation plans when needed. The Air Planning Unit provides coordination and support for state and tribal smoke management programs and supports state and tribal air monitoring programs.	• providing technical assistance and coordination for smoke management review • acting on State and Tribal Implementation Plan submittals • developing Federal Implementation Plans as needed to implement CAA requirements • designating areas as attainment or nonattainment for the NAAQS, including Indian Country • awarding and managing CAA 103 and 105 grants to state and local agencies • providing programmatic air monitoring support

Stationary Source Unit The Air Stationary Source Unit issues air permits in places where there is no authorized state or tribal program. This unit approves and oversees state and tribal air permitting programs, provides regulatory and technical assistance regarding the air toxics program, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and implements radiation protection programs.	• issuing major source operating permits (Title V) and major and minor source construction permits in Indian Country • issuing major source construction and operating permits in areas with federal jurisdiction (including Indian Country) • issuing FARR permits in WA, OR, and ID • acting on applications from states, local air agencies, and tribes for delegation of air permit programs • maintaining oversight of state permitting programs • performing reviews of state and local Title V programs

Resource Conservation & Recovery Act Unit The RCRA Program Unit authorizes the RCRA Subtitle C Hazardous Waste Program in the States of WA, OR and ID and directly implements it in AK. The purpose of the RCRA Subtitle C program is to ensure the safe handling of hazardous wastes. The Unit supports hazardous and solid waste activities on tribal lands. It also provides expertise in the development of national RCRA-related strategies, policies, and guidance documents.	• managing hazardous waste grants in authorized states • implementing the hazardous waste program in AK • reviewing all state RCRA program activities • overseeing the Hanford Dangerous Waste Permit • managing the Biannual Reporting for AK RCRA sites • maintaining the RCRA Info Database
Corrective Action, Permits and PCB Unit The Corrective Action, Permits and PCB Unit manages the RCRA Hazardous Waste Permitting and Corrective Action programs. This Unit issues RCRA Permits and PCB Approvals and oversees corrective actions at select RCRA facilities.	• issuing RCRA Permits • managing and overseeing the clean-up of contamination at regulated facilities • providing technical and regulatory information, advice and assistance to permitted facilities, the public, tribes, states, local agencies, and other federal agencies • consulting with tribes whose interests are affected by EPA R10 RCRA Hazardous Waste Permits or Corrective Actions
Prevention and Materials Management Unit The Prevention and Materials Management Unit implements the Pollution Prevention (P2) Act, the RCRA Sustainable Materials Management (SMM) Program, the Energy Star Program, and the RCRA Subtitle D Solid Waste Permitting Program. Special areas of emphasis are source reduction for the prevention of chemical releases, energy efficiency, the reduction of upstream impacts of manmade materials on the environment, and the approval of State Solid Waste Permitting Programs.	• awarding and managing P2 grants for source reduction of hazardous chemicals, pollutants, and substances • developing the P2 technical assistance network (agencies, tribes, businesses) • fostering energy efficiency and renewable energy, including Energy Star • implementing the SMM program and working to reduce upstream impacts of materials on the environment • approving RCRA Subtitle D Permit Programs

Office of Air & Waste Tribal Specialists:

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EPA Region 10 Office of Air Waste and Toxics: http://yosemite.epa.gov/R10/AIRPAGE.NSF/webpage/Air+Quality
http://yosemite.epa.gov/r10/owcm.nsf/recycle/waste

EPA Region 10 Office of Compliance and Enforcement

The Office of Compliance & Enforcement (OECA) provides enforcement, compliance assurance, and compliance assistance for ground water, pesticides and toxics, wastewater (NPDES), air, and solid and hazardous waste (RCRA) programs. Working in partnership with tribal governments, state governments, and other federal agencies, EPA ensures compliance with the nation's environmental laws. Nationally, EPA maintains a website to allow citizens to report a potential violation of environmental laws and regulations. Information submitted will be forwarded to EPA environmental enforcement personnel or to the appropriate regulatory authority. http://www.epa.gov/tips/

Units & Programs	Priorities & Activities
Clean Air Act Compliance The Clean Air Act (CAA) is the federal law that regulates air emissions from stationary and mobile sources. This program investigates suspected noncompliance of emission sources in Indian Country. Federal Air Rules for Reservations (FARR) lists certain "prohibited materials" that cannot be burned. These materials are commonly prohibited by air agencies because burning these materials produces toxic chemicals. Certain existing sources of air pollution must also register their emissions with EPA on an annual basis.	• ensuring compliance with the CAA and the FARR • evaluating suspected noncompliance of emission sources in Indian Country through investigating tips/complaints and, where needed, conducting compliance inspections, determining the appropriate enforcement response, and resolving violations in order to bring sources into compliance • implementing the terms of authorization agreements for those tribes in Region 10 with CAA inspector credentials, including the development of annual inspection plans, the review of inspection reports, and coordination of any followup enforcement action that EPA proposes to take
Clean Air Act 112r Risk Management Program When Congress passed the Clean Air Act Amendments of 1990, section 112r required EPA to publish regulations and guidance for chemical accident prevention at facilities using substances that posed the greatest risk of harm from accidental releases. These regulations require companies of all sizes that use certain listed regulated flammable and toxic substances to develop a Risk Management Program.	• ensuring compliance with the CAA section 112r • evaluating suspected noncompliance at regulated facilities in Indian Country through investigating tips/complaints, and where needed, conducting compliance inspections, determining the appropriate enforcement response, and resolving violations in order to bring facilities into compliance
Resource Conservation and Recovery Act The Resource Conservation and Recovery Act (RCRA) Enforcement Program closely monitors hazardous waste handler activities, taking legal action when handler is in noncompliance, and providing compliance incentives and assistance.	• ensuring compliance with the RCRA Subtitle C Hazardous Waste Program • evaluating suspected noncompliance at regulated facilities in Indian Country through investigating tips/complaints, and where needed, conducting compliance inspections, determining the appropriate enforcement response, and resolving violations in order to bring facilities into compliance

Pesticides The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for federal regulation of pesticide distribution, sale, and use. The pesticides program works to reduce pesticide risk through enforcement and outreach activities. Our region currently has two pesticide cooperative agreements with tribes; one with the Yakama Nation and one with the Coeur d'Alene tribe that also covers the Kootenai, Nez Perce, Colville, Kalispell, and Spokane tribes. EPA also has an interagency agreement with the Indian Health Service to provide free pest and pesticide consultations and technical assistance to tribes in WA, OR, and ID.	• ensuring FIFRA compliance through investigation of reported pesticide misuse • implementing the terms of cooperative agreements for those tribes in R10 receiving FIFRA STAG funds, including the review of inspection reports and coordination of any followup enforcement actions that the EPA proposes to take • ensuring pesticide products are sold and distributed legally • providing a legal mechanism for applicators to apply restricted use pesticides in Indian Country • providing integrated pest management outreach as requested • providing pesticide worker protection outreach as requested • providing assistance on pollinator protection activities • coordinating with water monitoring efforts that affect tribes
Emergency Planning and Community Right-toKnow Act The objectives of the Emergency Planning and Community Right-To-Know Act (EPCRA) are to: allow state and local planning for chemical emergencies; provide for notification of emergency releases of chemicals; and address communities' right-to-know about toxic and hazardous chemicals.	• ensuring compliance with EPCRA sections 304/311/312 and CERCLA Section 103 (annual and release reporting) • evaluating suspected noncompliance at regulated facilities in Indian Country through investigating tips/complaints, and where needed, conducting compliance inspections, determining the appropriate enforcement response, and resolving violations in order to bring facilities into compliance
Clean Water Act Compliance The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The National Pollutant Discharge Elimination System (NPDES) Compliance Unit monitors compliance with EPAissued NPDES permits and takes appropriate actions to enforce the provisions of those permits as well as other issues of compliance with the CWA.	• ensuring compliance with the CWA • evaluating suspected noncompliance of pollutant discharges into waters of the United States in Indian Country through investigating tips/complaints, and where needed, conducting compliance inspections, determining the appropriate enforcement response, and resolving violations in order to bring facilities into compliance
Wetlands Enforcement The EPA co-administers the Clean Water Act Section 404 program with the U.S. Army Corps of Engineers (USACE). Section 404 requires a permit before dredged or fill material may be discharged into waters of the U.S., including wetlands, unless the activity is exempt from this regulation (e.g. certain farming and forestry activities). Activities regulated include fill for development, water resources projects (such as dams and levees), infrastructure development (such as highways and airports), and mining projects.	• enforcing CWA section 404 provisions • determining the scope of geographic jurisdiction and the applicability of exemptions • reviewing and commenting on individual permit applications • having authority to prohibit, deny, or restrict the use of any defined areas as a disposal site (Section 404c) • ability to elevate specific cases (Section 404q)

Drinking Water Enforcement Oversees implementation of the Safe Drinking Water Act (SDWA), which is the national law safeguarding tap water in America.	• ensuring compliance with the SDWA • conducting compliance and enforcement for drinking water systems on tribal lands
Underground Storage Tanks The Underground Storage Tank (UST) / Leaking Underground Storage Tank (LUST) Program works to prevent petroleum and other products stored in USTs from contaminating groundwater.	• ensuring compliance with the Solid Waste Disposal Act (SWDA), Subtitle I • requiring every regulated underground storage tank system be inspected every 3 years, and requiring reporting and cleanup of leaking underground storage tank systems
Underground Injection Control The Underground Injection Control (UIC) program is designed to prevent ground water contamination from injection wells and to ensure appropriate underground disposal of hazardous wastes.	• ensuring compliance with Safe Drinking Water Act (SDWA) • requiring any injection of a fluid into a well or other underground fluid distribution system be registered with EPA prior to construction/use
Polychlorinated Biphenyls Congress enacted the Toxic Substances Control Act (TSCA) to control the distribution, use, and disposal of harmful chemicals, including Polychlorinated Biphenyls (PCBs).	• ensuring compliance with PCB cleanup standards through the approval and management of facility cleanups (40 CFR Part 761)
Lead Paint Program The TSCA Lead Paint rules protect children from lead-based paint and lead hazards. The goal of EPA's enforcement program is to protect public health, deter would-be violators, and level the playing field for companies that follow the law.	• evaluating suspected noncompliance through investigation of tips/complaints, and where needed, conducting compliance inspections, determining the appropriate enforcement response, and resolving violations in order to bring companies/renovators into compliance • educating renovators, renters, and construction firms about the requirements of the TSCA Lead Paint rules

Office of Compliance and Enforcement Tribal Specialist:

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Compliance and Enforcement: http://yosemite.epa.gov/R10/ENFORCE.NSF/homepage/OCE+Main+Page

EPA Region 10 Office of Environmental Review and Assessment

Region 10's Office of Environmental Review and Assessment (OERA) provides scientific and technical leadership and expertise for assessing the condition of the environment in support of National Environmental Policy Act (NEPA) reviews, media program decision-making, and scientific initiatives. The work involves collecting and analyzing data to characterize the environment, investigating environmental problems, and evaluating proposed solutions. Scientific and engineering capabilities are directed toward environmental modeling, monitoring and assessment, chemical and microbiological laboratory analyses, facility compliance inspections, geographic information system (GIS) support, risk assessments, management of Region 10's Quality Assurance Program, and providing technical assistance to partner agencies and the public. OEA is the lead office for climate change work. OEA works closely with EPA Programs to identify priority program work as well as special cross-cutting projects. Tribal requests that come to EPA Programs are often supported by OEA's work, and OEA provides several key support functions to the Programs that relate to tribes.

Units & Programs	Priorities & Activities
NEPA Review & Sediment Management Unit National Environmental Policy Act (NEPA) reviewers evaluate assessments of environmental impacts that may result from federally funded projects. Reviewers conduct evaluations and provide comments and recommendations to responsible agencies. Specialists manage and monitor ocean disposal sites for sediments, vessels, and fish processors, and participate in workgroups.	• reviewing assessments for mining, transportation, development, and other projects • ensuring tribal concerns are considered • ensuring financial assurance is adequate • assisting ACE in ocean disposal site permitting • managing and monitoring ocean disposal sites • assisting NOAA with National Ocean Policy Initiative • assisting WA with Ocean Acidification & Marine Resources • assisting Superfund with evaluating Marine Debris impacts
Aquatic Resources Unit The EPA co-administers a Clean Water Act (CWA) section 404 program with the Army Corps of Engineers (ACE) that regulates the discharge of dredge and fill materials from development, water resource, infrastructure, and mining projects into waters of the U.S., including wetlands. R10 also works to enhance state and tribal wetlands programs with grants and technical assistance.	• reviewing and evaluating CWA 404 permit applications • ensuring adequacy of compensatory mitigation • evaluating state and tribal applications for program assumption • managing state and tribal wetland program grants • facilitating development of state and tribal wetland plans • providing training/ technical assistance
Environmental Services Unit The Environmental Services Unit supports regional programs through: QA support by reviewing and approving Quality Assurance Project Plans; scheduling Contract Lab Program support and data quality validation; Dive Team support for various projects; asbestos sampling and analysis; biology support to EIS development; mining geochemistry support to various programs; and field support in the form of sampling and monitoring and watercraft.	Environmental services work supports R10 Programs in activities such as: • inspections • quality assurance • Field and Dive team operations • asbestos sampling and analysis • mining geochemistry

Risk Evaluation Unit The Risk Evaluation Unit is responsible for characterizing the environment as well as assessing risks to people and ecosystems. It includes experts in the physical, chemical, and biological sciences that work on a variety of issues such as: consumption of fish and shellfish; stressors to aquatic ecosystems; and recommending ways to reduce human health and ecological risks from exposure to persistent, bioaccumulative, and/or toxic chemicals (lead, pesticides, PCBs, dioxins).	Risk assessment and hydrogeology work supports R10 programs and projects such as: • Superfund and RCRA sites- assessment, response, reviews • water, drinking water, NPDES, water quality standards • wetlands, air toxics • compliance and enforcement • Endangered Species Act support • pesticide exposure and nitrates in groundwater in ag. areas • tribal exposure factors (such as fish consumption rates)
Environmental Services Unit The Environmental Services Unit supports regional programs through: QA support by reviewing and approving Quality Assurance Project Plans; scheduling Contract Lab Program support and data quality validation; Dive Team support for various projects; asbestos sampling and analysis; biology support to EIS development; mining geochemistry support to various programs; and field support in the form of sampling and monitoring and watercraft.	Environmental services work supports R10 Programs in activities such as: • inspections • quality assurance • Field and Dive team operations • asbestos sampling and analysis • mining geochemistry
Environmental Characterization Unit The Environmental Characterization Unit provides broad scientific and technical support to regional programs, focusing on the air and water programs. It includes experts in atmospheric sciences and meteorology, aquatic ecosystems, fisheries biology, landscape ecology, hydrogeology, engineering, Geographic Information Systems (GIS), and data analysis, quality, and systems. Staff provide advice and technical assistance to state, local, and tribal agencies, other federal agencies, international organizations, and the general public. Staff participate in the development of technical guidance in their respective areas of expertise, and participate in professional organizations and conferences.	Environmental characterization work supports R10 programs in activities such as: • supporting GIS and other software applications • managing national environmental databases • implementing data quality policy and planning and facilitating regional data system development • air quality modeling and impact assessment • reviewing and commenting on NEPA documents • overseeing state, local, and tribal air quality monitoring and modeling programs – e.g., FARR • developing burn ban procedures for Reservations • managing submittal of state and tribal data to databases • giving technical and programmatic oversight to state, local, and tribal water quality monitoring programs • characterizing ecosystems and conditions • managing central data exchange (CDX) network grants • technical reviews of tribal water grants

Region 10 Laboratory The EPA Region 10 Laboratory is NELAC accredited with state-of-the-art instruments. It is staffed with expert chemists, microbiologists and staff who support the analysis of environmental and criminal samples for chemical and microbiological contaminants in a wide range of sample matrices. Staff assure proper method selection, serve as expert witnesses in criminal investigations, audit and certify states' drinking water laboratories, and develop unique methods to address specific Regional project needs. Under a Department of Homeland Security initiative, the Laboratory is a member of the Environmental Response Laboratory Network and is developing capabilities to respond to National incidents.	Laboratory services support R10 Programs and activities including: • Water, Superfund, Brownfields, Enforcement • developing new methods and creating new instruments • utilizing specialty equipment for unique applications • Field and Dive Team operations
Unique Functions/Expertise OEA's Immediate Office includes water modeling, quality assurance management, climate change, sustainability, and the liaison to the EPA's Office of Research and Development.	The immediate office provides technical support for R10 Programs and initiatives including: • aquatic and temperature modeling that supports TMDL development and implementation as well as National program implementation (such as Lakes surveys) • Quality Assurance General- QMP and QAPP development and training; Superfund, RCRA and special project related sampling; QA assistance/training for grantees • Quality Assurance- tribal capacity building • Climate Change Advisor- supports climate change adaptation and mitigation for all programs including tribalrelated programs and tribal-specific concerns • Sustainability Advisor- Smart growth/sustainable development workshops and assistance; systems modeling assistance to tribes to address ecosystem based issues

Office of Environmental Review and Assessment Tribal Specialist: Bruce Duncan (206) 553-0218, duncan.bruce@epa.gov

Environmental Assessment: http://yosemite.epa.gov/r10/oea.nsf/webpage/Environmental+Assessment

EPA Region 10 Office of Environmental Cleanup

Region 10's Office of Environmental Cleanup (ECL) is responsible for Superfund Removal and Remedial programs, the Brownfield's program, the Emergency Response and Management program, and the Federal Facility Oversight program. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. The EPA conducts and supervises investigations and cleanup actions at sites where oil or hazardous substances have been or may be released into the environment. The National Priorities List (NPL) includes sites of known or threatened releases of hazardous substances, pollutants, or contaminants throughout the U.S. and its territories, and assists in determining which sites warrant further investigation. There are over a hundred NPL or NPL equivalent sites in Region 10, and the majority of them affect tribal interests.

Programs & Units	Priorities & Activities
Program Management Unit This unit provides management and technical support services for Region 10's Office of Environmental Cleanup.	• management of grants, cooperative agreements, and interagency agreements for Technical Assistance Services for Communities, Superfund Job Training, and Environmental Workforce Development and Job Training • management of contracts for remedial, removal and emergency response actions, and state Superfund • tribal coordination and consultation assistance • response to Freedom of Information Act (FOIA) requests
Site Assessment Site Assessment is the process that the EPA uses to gather information about and evaluate sites for potential inclusion on the National Priorities List (NPL) and other options. Generating reports called Preliminary Assessments and Site Inspections are part of the evaluation process.	• reports are generated by the EPA or state or federal counterparts to evaluate potential sources of site contamination, pathways for releases, and potential impacts • Preliminary Assessments - typically rely on existing information to determine if site sampling is warranted • Site Inspections - typically involve a degree of field sampling and collection of additional information to determine if further action is required, including potential for listing on the NPL • the Hazard Ranking System (HRS) serves as the principal mechanism the EPA uses to place uncontrolled waste sites on the NPL. These are the most serious sites identified for possible long-term cleanup
Remedial (Superfund) Cleanup Program Region 10's Remedial Cleanup Program (Site Cleanup Units 1, 2 and 3 and Hanford Cleanup Office) protects human health and the environment by assessing and cleaning up some of most contaminated hazardous waste sites in Idaho, Oregon, Washington, and Alaska.	• managing and overseeing National Priority List sites and non-NPL sites and incorporating community involvement activities into most phases of CERCLA work • Non-Time Critical Removal Actions or "Early Actions" deemed necessary to protect human health or the environment prior to completing the Remedial Investigation/Feasibility Study (RI/FS) and remedy decision • consultation typically occurs at or near the completion of the Engineering Evaluation/Cost Analysis (EE/CA) phase and concludes with the issuance of an Action Memorandum

Brownfields In addition to conducting site assessments, Region 10's Site Assessment/ Brownfield Unit works on Brownfield and Land Revitalization, balancing protecting human health and the environment with redevelopment. Many "Brownfield" sites were created when manufacturing plants or facilities closed or moved. The EPA supports the assessment and cleanup of these sites for re-use through funding assistance agreements. Tribes in Alaska are eligible for Brownfield State and Tribal Response Program Grants only. Alaska Village and Regional Corporations are eligible for the other types of grants listed here.	• Brownfield State and Tribal Response Program Grants- help ensure that response programs include certain elements and maintain a public record of sites addressed • Brownfield Assessment Grants- for recipients to inventory, characterize, assess, and conduct planning and community involvement related to Brownfield sites • Brownfield Revolving Loan Fund Grants (RLF)- provide funding for recipients to capitalize a revolving loan fund and to provide sub-grants to carry out cleanup activities • Environmental Workforce Development and Job Training Grants- allow organizations to recruit, train, and place unemployed and under-employed people living in areas affected by solid and hazardous waste • Brownfield Cleanup Grants- provide funding to carry out cleanup activities at Brownfield sites. Cleanup grants require a 20% cost share, and applicants must own the site
Emergency Management Program Region 10's Emergency Management Program (Emergency Response Unit and Emergency Preparedness and Prevention Unit) responds to remove imminent and substantial threats to human health and the environment. The EPA works closely with the Federal Emergency Management Agency (FEMA) and the U.S. Coast Guard to plan and prepare to respond to disasters. The EPA is the lead for Emergency Support Function #10 for natural disasters that cause hazardous substance releases and/or oil spills. The EPA does not have the resources or the authority to help communities with overall disaster planning or preparedness. Questions related to community disaster preparedness, planning, and recovery should be directed to FEMA.	• Time-Critical Removal Actions - cleanup actions that are generally limited to planning periods of less than 6 months and where the environmental conditions require actions to limit acute risk to human health and the environment • Non-Time Critical Removal Actions - cleanup actions that meet the criteria for a Time-Critical Removal Action, but have planning periods longer than 6 months and include preparation of an Engineering Evaluation/Cost Analyses • Emergency Responses - conducted to provide immediate management and oversight to chemical, oil, biological and radiological releases and large-scale national emergencies, including homeland security incidents, when requested. • Oil Cleanup Actions - under the Oil Pollution Act (OPA), the EPA is the lead federal response agency for oil spills occurring in and around inland waters of the U.S. The U.S. Coast Guard is the lead response agency for spills occurring in coastal waters and deep-water ports • Spill Prevention, Control, and Countermeasures (SPCC) and Facility Response Plans (FRP) - provides the requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines by specific facilities • Emergency Response Planning - as required under the National Contingency Plan, preparedness, coordination and communication on current and emerging threats is accomplished by participating in area committees, Regional Response Teams, and other work groups and task forces

Office of Environmental Cleanup Tribal Specialist: Joanne Moore (206) 553-0310, moore.joanne@epa.gov

http://yosemite.epa.gov/R10/CLEANUP.NSF/webpage/Cleaning+Up+the+Pacific+Northwest+and+Alaska

EPA Region 10 Office of Management Programs

Region 10's Office of Management and Programs (OMP) manages the implementation of administrative programs and provides resource assistance to all EPA Region 10 programs. Our work includes administering grants and interagency agreements, strategic planning and fiscal management, managing infrastructure and human resources, managing information technology and Freedom of Information Act (FOIA) requests, and maintaining the Public Environmental Resources Center.

Units & Programs	Priorities & Activities
Public Environmental Resource Center	• maintaining environmental resources for the public • offering publications, educational material, and video loans • routing calls and questions about environmental matters
Grants and Interagency Agreements Unit	• administratively reviewing grant applications • issuing and closing out grant awards • providing timely and accurate grant information and administrative assistance to grant recipients • streamlining regional grants procedures • conducting grant compliance and enforcement activities • conducting on and off-site assistance reviews, baseline and advanced post-award monitoring, and audit resolution • hosting the EPA's Interagency Agreement Shared Service Center- West, reviewing and issuing ~1/2 of EPA's IAs • engaging in national workgroups regarding changes in grants and interagency agreements administration • supplementing national trainings on grants and interagency agreements management topics
Fiscal Management and Planning Unit	• Budget and Finance– managing regional resources, providing technical and financial expertise, guidance, and quality assurance in accordance with Agency directives • Planning – providing framework for setting, focusing and evaluating regional priorities, maintaining and revising Regional Strategic Plan, liaising with Headquarters on EPA Strategic Plan, Annual Commitment System, and National Program Management guidances
Other Units and Functions	• human resources and facilities • information services and resources • records and FOIA management • immediate office

Office of Management Programs Tribal Specialists:

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Grants: http://yosemite.epa.gov/R10/HOMEPAGE.NSF/webpage/GRANTS

EPA Region 10 Office of Regional Counsel

The Office of Regional Counsel (ORC) provides legal representation, advice, and support to all other offices in EPA's Region 10. ORC is organized with an Immediate Office headed by the Regional Counsel and Deputy Regional Counsel, and three units supervised by Managers. Work in each unit is generally divided by statute or subject area.

Units & Programs	Priorities & Activities
Immediate Office General Law: Grants, Ethics, Personnel Regional Judicial Officer Criminal Environmental Enforcement Indian Law	• legal counseling on grant issues across EPA's programs • ethics counseling to EPA staff • assist with criminal enforcement under EPA's statutes • provide legal counseling regarding the interpretation and application of federal laws in Indian Country, including treaty rights and Treatment as State processes
Unit 1 Clean Air Act (CAA) Resource Conservation and Recovery Act (RCRA) Underground Storage Tanks (part of RCRA) Toxic Substances Control Act (TSCA), Emergency Planning and Community Right-toKnow Act (EPCRA), and Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)	• compliance assistance and enforcement activities regarding tribal facilities • consultation regarding enforcement response to violations by non-tribal facilities • use of tribal experts in enforcement actions against nontribal facilities • consultation regarding cleanup options and procedures at tribal facilities or other facilities in Indian Country
Unit 2 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA/ Superfund)	• counseling and enforcement advice for all phases of response actions under Superfund for fund-lead cleanups and cleanups conducted by potentially responsible parties • tribal consultation regarding cleanup and/or enforcement actions at Superfund sites in Indian Country
Unit 3 Clean Water Act (CWA) Safe Drinking Water Act (SDWA) Public Water Supply (PWS) National Environmental Policy Act (NEPA)	• water quality standards approvals • supporting CWA section 401 certifications • supporting NPDES permit issuances and appeals • compliance assistance and enforcement activities regarding tribal facilities, consultation regarding enforcement response to violations by non-tribal facilities

All Units	• responses to questions from tribes about implementation of federal environmental laws in Indian Country • counseling on National Historic Preservation Act (NHPA) • other general training sessions (FARR, FIFRA, UIC, etc.)
Office of Regional Counsel Tribal Specialists: Lisa Castañon (206) 553-0464, castanon.lisa@epa.gov / Ted Yackulic (206) 553-1218, yackulic.ted@epa.gov Regional Counsel: http://www.epa.gov/ogc/regional.htm	

III. Regulated Entities of Interest

May 19, 2020 search of EPA ENVIROFACTS yielded 120 facilities using search terms "**On Jamestown S'Klallam Tribe and 10 mile area surrounding"** Link to web search.

EnviroMapper®

LIST OF EPA-REGULATED FACILITIES IN ENVIROFACTS

FACILITY INFORMATION	ICIS-Air	ACRES	BR	SEMS	GHG	ICIS-NPDES	RAD Info	RCRA Info	TRI	TSCA	Tribal Land Name
A & A TRUCK & AUTO SERVICE INC 614 N OAKRIDGE DR PORT ANGELES, WA 98362 Latitude: 48.11014 Longitude: -123.36533 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.45807 miles
ADMIRAL MARINE WORKS INC SETON RD 130 SETON RD PORT TOWNSEND, WA 98368 Latitude: 48.0829 Longitude: -122.81421 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.15755 miles
AFFORDABLE SERVICES 258663 HIGHWAY 101 SEQUIM, WA 98382 Latitude: 48.08811 Longitude: -123.22673 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.93901 miles
ARCO 5659 PSI 5329 279 W WASHINGTON SEQUIM, WA 98382-3339 Latitude: 48.07966 Longitude: -123.10715 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.80176

IV. Mutual Roles and Responsibilities

EPA-Tribal Environmental Plan

ROLES AND RESPONSIBILITIES

The EPA and the tribe will work to fulfill the roles and responsibilities described here, and to protect tribal health and environments, to the best of our abilities with available resources.

A. EPA

1. EPA will support the Tribe in developing the capacities to build environmental protection programs and to assume authorities for direct implementation of programs as set forth in this Plan and consistent with EPA's authorities, statutory and regulatory provisions, and resources.
2. EPA will make all efforts to provide the Tribe with timely notice of available grants and other sources of funding, training, technology transfer, and meetings that may enhance the tribe's capacity to meet environmental program objectives and address environmental priorities.
3. EPA will implement the federal environmental programs for which it is responsible and \viii oversee those programs which states and tribes are authorized to implement on EPA's behalf.
4. EPA will provide enforcement assistance to tribal programs that have received authorization for direct implementation as set forth in authorization agreements and this Plan.
5. EPA will support and promote the principles of tribal self-government and government - to government relations in the implementation and administration of environmental programs, as described in EPA's Indian Policy and Implementation Guidance (1984).
6. EPA will consult on a government-to-government basis when Agency actions or decisions may affect tribal interests, as described in the EPA's Consultation and Coordination Policy (2011) and in Region lO's Consultation and Coordination Procedures (2012).
7. EPA will work to make a visible difference in communities and to enhance state, tribal, local and international partnerships as described in EPA's 2014-18 Strategic Plan.
8. EPA will work to consider and address environmental justice concerns as described in EPA's Environmental Justice Plan and Policy for Tribes and Indigenous Peoples (2014).
9. EPA recognizes tribal cultural concerns such as subsistence needs, traditional uses of natural resources, and areas of cultural significance. To the degree that EPA can address these concerns when making decisions and implementing programs, it will do so.

B. Tribe

1. JST will work to develop the capacities to build environmental protection programs and to assume authorities for direct implementation of programs as set forth in the Plan and the GAP Workplan, and consistent with its authorities and statutory and regulatory provisions.
2. JST will have the responsibility of setting priorities and collaborating with local, regional, state and federal partners.
3. JST will have the responsibility of fulfilling all applicable requirements and maintaining the terms and conditions of all cooperative agreements.

C. Mutual

1. JST and EPA will review this Plan and progress under GAP workplans in conjunction with developing new GAP proposals and agreements and will update this Plan as necessary.

V. Other Requests

Appendices

Appendix A: Milestones and Measurement Criteria: From Protecting and Restoring the Waters of Sequim Bay (2013).

TRIBAL PRIORITY	NPS MANAGEMENT STRATEGY	MILESTONES FOR IMPLEMENTATION	TIMING	KEY PARTNERS	MEASUREABLE OUTPUTS	MEASURABLE CRITERIA FOR EVALUATING PROGRESS (Outcomes)
HIGH	**Human Waste Management**	Support County programs for septic O&M, septic inspection and remediation	ongoing	County	# septic systems pumped database tracking of septic O&M # systems inspected and repaired # classes Septics 101	Sequim Bay DOH shellfish areas continue to meet APPROVED criteria
MEDIUM	**Stormwater management**	Reduce stormwater impacts	1.5 yrs	County, Tribe	County approval of Comprehensive Stormwater Strategy; Development of Stormwater ordinance; clearing and grading ordinance; County Roads Dept install LID in roadside ditches	No increase in metals or hydrocarbons for baseline streams. Hydrology impacts reduced.
			5 yrs	Tribe	Retrofit tribal facilities	
		Raise public awareness	5 yrs	volunteers	Signage program at stormwater drains	
		Increase use of LID methods	5 yrs	Tribe, County, CCD	County approval of LID techniques	
MEDIUM	**Animal Waste Management**	Implement pet waste program	1 yr	Tribe, EPA, volunteers	mailings and posters distributed	Reductions in fecal coliform loading to Sequim Bay (as measured by quarterly SK and JSKT monitoring)
			2 yrs	County parks	install pet waste stations	
HIGH	**Monitoring**	Shellfish sampling	ongoing	Tribe, DOH	bi-weekly for intertidal harvest during PSP season; weekly for geoduck harvest	Safe consumption of shellfish by tribal citizens and general public
		Marine waters	ongoing	Tribe, DOH	Monthly sampling	Continued achievement of certified shellfish beds

						standards
HIGH		Toxic Phytoplankton	Ongoing	Tribe, NOAA	Weekly Summer/ biweekly winter	Safe consumption of shellfish by tribal citizens and general public. Understanding of DSP problem.
		Freshwater	ongoing	Streamkeeper Baywatchers, Tribe, County	monthly sampling; quarterly for some parameters	Safe wading/swimming for tribal citizens and general public; attain temperature/DO targets for fish bearing streams
		Complete annual data analysis	annual	Clean Water Work Group	Annual review of results	Adaptive mgt of strategies based on results.
		Achieve capacity to monitor all nine parameters required under CWA Section 106		Tribe	trained staff, all equipment available, funding for staff, materials, transportation, lab costs	Attain water quality standards for all nine parameters
ACTIVITY DEPENDENT: **HAB RESEARCH IS HIGH** **EVERYTHING ELSE MEDIUM**	**Research**	Evaluate harmful algal blooms and shellfish tissue correlation	1 yr	Tribe, NOAA	Identify relationship between harmful algal blooms in water column and shellfish tissue (not understood to date)	Adaptive mgt of strategies based on results.
		Evaluate Sequim Bay for nutrients and wildlife contribution	5 yrs	Tribe, Ecology, DOE, WDFW	to be developed	Adaptive mgt. based on results.
		Evaluate culture methods for oysters, clams etc	ongoing	Tribe, volunteers	Shellfish gardens completed	Adaptive mgt. based on results.
		GIS analysis and remote sensing	ongoing	Tribe, CCD, County	annual airphotos, updated maps	
		Evaluate effectiveness of BMPs	ongoing	Tribe, County, CCD	progress reports	Adjustment of BMPs to achieve water quality standards

MEDIUM	**Regulatory**	Upgrade city and county ordinances	1 to 5 years	County, Ecology	Adopt stormwater ordinance	Improved water quality (bacteria, nutrients, chemicals)
				MRC, City	Designate nearshore critical areas	Revisions to CAO and SMP
				County, Tribe, CCD	Identify barriers to improved water quality in ordinances	Updated ordinances leading to improved water quality
		Develop/update Tribal ordinances	1 to 5 years	Tribe	Improve jurisdictional control over tribal waters	Updated/new ordinances leading to improved water quality
TRIBAL PRIORITY	**NPS MANAGEMENT STRATEGY**	**MILESTONES FOR IMPLEMENTATION**	**TIMING**	**KEY PARTNERS**	**MEASUREABLE OUTPUTS**	**MEASURABLE CRITERIA FOR EVALUATING PROGRESS (Outcomes)**
LOW	**Education and Outreach**	Public workshops on water quality issues	annual	County, CCD, River Center, Tribe	# Workshops conducted; # individuals attending	Behavior change leading to improved water quality; participant feedback
MEDIUM		Prepare written material for public outreach	annual	County, CCD, Tribe	Newspaper articles and mailings; annual milestones report of DRMT; # publications distributed	Understanding of project work leading to community support.
HIGH		Booths, fairs and festivals	annual	all partners	Dungeness River Festival; other festivals; attendance and participation	Behavior change leading to improved water quality; participant feedback
HIGH		Design and implementation of interpretive displays	5 years	River Center	Permanent displays at River Center	Understanding of project work leading to community support, and behavioral changes leading to improved water quality.

LOW		Information for recreational boaters	1-5 years	WDFW, County parks, Tribe	Interpretive signs and brochures for boaters at launch sites.	Behavior change or continued stewardship by vessel owners.
HIGH		In-class and in-field school programs	on-going	River Center; Tribe; CCD; County	# of students reached;# of accompanying adults reached	Evaluate student understanding of watershed processes and impacts from actions; participant feedback; teacher feedback.

Appendix B: Milestones and Measurement Criteria: From Protecting and Restoring the Waters of the Dungeness (2007).

TABLE 8-1: MILESTONES FOR IMPLEMENTATION & MEASURABLE CRITERIA FOR EVALUATING PROGRESS

Notes: This table has been organized around Jamestown S'Klallam Tribal natural resources sub-goals, shown in the shaded areas, and the NPS categories addressed. Under each goal the table summarizes management strategies, milestones for implementation, anticipated timing (subject to funding), key watershed partners, how our outputs will be measured, and the criteria to be used to evaluate progress. There is a considerable amount of overlap between Tribal goals, and the management strategies may address more than one source of NPS pollution. Thus, some of the major milestones and evaluation criteria may apply to more than one goal and NPS category. More information on how the management strategies relate to NPS categories and sub-categories is in table ___.

TRIBAL SUB-GOAL: Ensure water quality that protects fish and wildlife resources and provides safe food and water.

NPS Categories Addressed: Agriculture, Hydromodification & Habitat Alteration, Urbanization, Marinas & Vessels

NPS MANAGEMENT STRATEGY	MILESTONES FOR IMPLEMENTATION	TIMING	KEY PARTNERS	MEASUREABLE OUTPUTS	MEASURABLE CRITERIA FOR EVALUATING PROGRESS (Outcomes)
Human Waste Management	Support County programs for septic O&M, septic inspection and remediation	ongoing	County	# septic systems pumped database tracking of septic O&M # systems inspected and repaired # classes Septics 101	Reductions in fecal coliform loading to Matriotti Creek, Dungeness River & Bay: achieve 80% of required reduction by 2010, meet water quality standards by 2012
	Support the development of community systems for areas of concern	5 years	County	Feasibility studies completed for 3 systems, and at least one to design & construction phase.	
	Buyout remaining parcels at Rivers End and decommission septic systems	3 years	Tribe, County, WDFW, NOLT	Parcels purchased and septics decommissioned.	
Stormwater Management	Treatment of irrigation ditch tailwaters	5 years	CCD, WUA	Installed treatment sites	Achieve net reductions in nitrates for Carlsborg and other elevated areas; achieve net reductions in bacteria; achieve public health standards
	Piping of irrigation ditches	20 years	WUA	# feet ditch lined	
	Increase use of LID methods	5 years	Tribe, County, CCD	County approval of LID techniques	
	Reduce stormwater impacts	1.5 years	County, Tribe	County approval of upgraded stormwater manual; County Roads Dept install LID in roadside ditches	No increase in metals or hydrocarbons for baseline streams.
		5 years	Tribe	Retrofit tribal facilities	
	Raise public awareness	5 years	volunteers	Signage program at stormwater drains	
Animal Waste Management	Implement pet waste program	1 year	Tribe, EPA, volunteers	mailings and posters distributed	Reductions in fecal coliform loading per TMDLs
		2 years	County parks	install pet waste stations	
	Reduce domestic animal waste	5 years	CCD	Complete farm plans with BMPs	

	Enforce animal waste violations	ongoing	Ecology	Last resort after outreach and technical assistance.	
Monitoring	Shellfish sampling	ongoing	Tribe, DOH	bi-weekly for intertidal harvest during PSP season; weekly for geoduck harvest	Safe consumption of shellfish by tribal citizens and general public
	Marine waters	ongoing	Tribe, DOH	Monthly sampling	Achievement of certified shellfish beds in Dungeness Bay by 2012
	Freshwater	ongoing	Streamkeepers, Baywatchers, Tribe, County	monthly sampling; quarterly for some parameters	Safe wading/swimming for tribal citizens and general public; attain temperature/DO targets for fish bearing streams
	Complete annual data analysis	annual	Clean Water Work Group	Annual review of results	Adaptive mgt of strategies based on results.
	Achieve capacity to monitor all nine parameters required under CWA Section 106		Tribe	trained staff, all equipment available, funding for staff, materials, transportation, lab costs	Attain water quality standards for all nine parameters
Research	Microbial source identification	1 years	Tribe, Battelle, Ecology, County	Identification of controllable sources of bacterial contamination.	Adaptive mgt of strategies based on results.
	Evaluate D Bay for nutrients and wildlife contribution	5 years	Tribe, Ecology, DOE, WDFW	to be developed	
	Evaluate culture methods for oysters, clams etc.	ongoing	Tribe, volunteers	Shellfish gardens completed	
	GIS analysis and remote sensing	ongoing	Tribe, CCD, County	annual airphotos, updated maps	
	Evaluate effectiveness of BMPs	ongoing	Tribe, County, CCD	progress reports	Adjustment of BMPs to achieve water quality standards
	Investigate restoration of pocket estuaries at Meadowbrook, Cooper, Casselary, Gierin Creeks	5 years	CCD, Tribe, WDFW	complete feasibility analysis and identify restoration options	
Regulatory	Upgrade city and county ordinances	1 to 5 years	County, Ecology	Adopt stormwater manual	Improved water quality (bacteria, nutrients, chemicals)
			MRC, City	Designate nearshore critical areas	Revisions to CAO
			County, Tribe, CCD	Identify barriers to improved water quality in ordinances	Updated ordinances leading to improved water quality
	Develop/update Tribal ordinances	1 to 5 years	Tribe	Improve jurisdictional control over tribal waters	Updated/new ordinances leading to improved water quality

Education and Outreach	Public workshops on water quality issues	annual	County, CCD, River Center, Tribe	# Workshops conducted; # individuals attending		Behavior change leading to improved water quality; participant feedback
	Prepare written material for public outreach	annual	County, CCD, Tribe	Newspaper articles and mailings; annual milestones report of DRMT; # publications distributed		
	Booths, fairs and festivals	bi-annual	all partners	Dungeness River Festival; attendance and participation		Behavior change leading to improved water quality; participant feedback
		annual	variable	booths, exhibits, fairs -- attendance and participation		
	Design and implementation of interpretive displays	5 years	River Center	Permanent displays at River Center		
		5 years	River Center, Tribe, WDFW, County parks	Interpretive trail signs		
	Information for recreational boaters	1-5 years	WDFW, County parks, Tribe	Interpretive signs and brochures for boaters at launch sites.		Behavior change or continued stewardship by vessel owners.
	In-class and in-field school programs	on-going	River Center; Tribe; CCD; County	# of students reached; # of accompanying adults reached		Evaluate student understanding of watershed processes and impacts from actions; participant feedback; teacher feedback.

Appendix C: Envirofacts Search Results.

Search Results

<< Return

Search Parameters: 1
On Jamestown S'Klallam Tribe and 10 mile area surrounding

API Link for Report Data: (*Copy and paste the link below to view the data from this report*)

https://data.epa.gov/efservice/multisystem/minLatitude/47.956379/maxLatitude/48.14553/minLongitude/-123.389143/maxLongitude/-1

Info
AIR
TOXICS
WASTE
RADIATION
WATER

*Zoom or pan map to change location.

Envirofacts Links

- EF Overview
- Search
- Model
- Data Update
- Multisystem Search User Guide
- Contact Us

Please wait...

EnviroMapper®

LIST OF EPA-REGULATED FACILITIES IN ENVIROFACTS

FACILITY INFORMATION	ICIS-Air	ACRES	BR	SEMS	GHG	ICIS-NPDES	RAD Info	RCRA Info	TRI	TSCA	Tribal Land Name
A & A TRUCK & AUTO SERVICE INC 614 N OAKRIDGE DR PORT ANGELES, WA 98362 Latitude: 48.11014 Longitude: -123.36533 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.45807 miles
ADMIRAL MARINE WORKS INC SETON RD 130 SETON RD PORT TOWNSEND, WA 98368 Latitude: 48.0829 Longitude: -122.81421 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.15755 miles
AFFORDABLE SERVICES 258663 HIGHWAY 101 SEQUIM, WA 98382 Latitude: 48.08811 Longitude: -123.22673 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.93901 miles
ARCO 5659 PSI 5329 279 W WASHINGTON SEQUIM, WA 98382-3339 Latitude: 48.07966 Longitude: -123.10715 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.80176

											miles
ARMSTRONG PLAT 151 OCTANE LN PORT ANGELES, WA 98362 Latitude: 48.094497 Longitude: -123.280225 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 5.36681 miles
AT&T BLYN T29N R2W S18 BLYN, WA 98382 Latitude: 48.006 Longitude: -122.983472 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.06711 miles
BATTELLE MARINE SCIENCES LAB 1529 W SEQUIM BAY RD SEQUIM, WA 98382 Latitude: 48.077366 Longitude: -123.046341 Summary Report Facility Report Compliance Report			View Report			View Report		View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.82181 miles
BELL WOODS PALO ALTO RD & OCONNOR DR SEQUIM, WA 98382 Latitude: 48.0563 Longitude: -123.052 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: .68603 miles
BELL WOODS CPI LLC PALO ALTO RD & OCONNOR DR SEQUIM, WA 98382 Latitude: 48.052847 Longitude: -123.061836 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
BLACKSTONE 1980-2098 W HENDRICKSON RD SEQUIM, WA 98382 Latitude: 48.08697 Longitude: -123.145241 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Distance from Tribal Land: .0024 miles

BLIEMEISTERS WOOD WORKS INC 782 KITCHEN DICK RD SEQUIM, WA 983829422 Latitude: 48.09554 Longitude: -123.20017 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.72625 miles
BLYN BASIN I 192 CORRIEA ROAD SEQUIM, WA 98382 Latitude: 48.02121 Longitude: -123.01188 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Distance from Tribal Land: .02353 miles
BONNY 1512 OLD BLYN HWY SEQUIM, WA 98382 Latitude: 48.03149 Longitude: -122.99194 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Distance from Tribal Land: .43424 miles
CAMERA READY 10 ERVING JACOBS RD PORT ANGELES, WA 98362 Latitude: 48.08346 Longitude: -123.30135 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 6.0748 miles
CAPE GEORGE CUTTERS INC 1924 CAPE GEORGE RD PORT TOWNSEND, WA 98368 Latitude: 48.10257 Longitude: -122.85707 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.33126 miles
CASCADE COMPOSITES LLC 331 W PINE ST SEQUIM, WA 98382 Latitude: 48.074227 Longitude: -123.108597 Summary Report Facility Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.82756

Compliance Report											miles
CEDARS AT DUNGENESS GOLF COURSE 1965 WOODCOCK RD SEQUIM, WA 98382 Latitude: 48.11612 Longitude: -123.17349 Summary Report Facility Report Compliance Report		View Report						View Report			Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
CHIMACUM PUPIL TRANSPORTATION COOP 241 W VALLEY RD CHIMACUM, WA 98325 Latitude: 48.012943 Longitude: -122.782345 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.61683 miles
CIRCLE & SQUARE INC 2621 CAPE GEORGE RD PORT TOWNSEND, WA 98368 Latitude: 48.102529 Longitude: -122.870509 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 7.83541 miles
CIRCLE & SQUARE INC PORT HADLOCK 10953 RHODY DR PORT HADLOCK, WA 98339 Latitude: 48.033072 Longitude: -122.782708 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.61763 miles
CITY LAKE CHLORINATION FACILITY 530 GROUSE LN PORT TOWNSEND, WA 98368 Latitude: 47.993943 Longitude: -122.847249 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
CLALLAM CNTY PUD 1 GLASS 1257 GLASS RD PORT ANGELES, WA 98362 Latitude: 48.040509 Longitude: -123.348724 Summary Report Facility Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.40135

Compliance Report											miles
CLALLAM CNTY ROAD MAINT SHOP FAC SEQUIM 153 WESTERN WAY SEQUIM, WA 98382 Latitude: 48.076055 Longitude: -123.136817 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: .65465 miles
CLALLAM COOPERATIVE ASSOC 216 E WASHINGTON SEQUIM, WA 98382-3485 Latitude: 48.07963 Longitude: -123.099 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.16994 miles
CLALLAM COUNTY PUBLIC UTILITY DISTRICT 2419 HIGHWAY 101 PORT ANGELES, WA 98362 Latitude: 48.104947 Longitude: -123.38796 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.49239 miles
COMMUNITY SHELL 11602 RHODY DR PORT HADLOCK, WA 98339 Latitude: 48.04123 Longitude: -122.78831 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.43663 miles
COSTCO WHOLESALE 104 100 HOOKER RD SEQUIM, WA 98382 Latitude: 48.07801 Longitude: -123.17292 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: .94602 miles
COSTCO WHOLESALE 639 955 W WASHINGTON ST SEQUIM, WA 98382 Latitude: 48.07878 Longitude: -123.12606 Summary Report Facility Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.02885

Compliance Report											miles
COURTESY FORD PORT TOWNSEND 14082 AIRPORT CUT OFF RD PORT TOWNSEND, WA 98368-2822 Latitude: 48.07116 Longitude: -122.81793 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.6964 miles
CRAFT 182 MARINAS WAY SEQUIM, WA 98382 Latitude: 48.11341 Longitude: -123.14603 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
DELHUR INDUSTRIES HALLER QUARRY 2657 RIVER RD SEQUIM, WA 98382 Latitude: 48.036599 Longitude: -123.140783 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.94596 miles
DINOSEB DRUM 500 BLK RIDGE VIEW DR LOT 18 P SEQUIM, WA 98382 Latitude: 48.120333 Longitude: -123.192528 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: .41438 miles
DISCOVERY BAY WATERLINE RELOCATION HWY 101 PORT TOWNSEND, WA 98368 Latitude: 47.996408 Longitude: -122.88512 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 5.13466 miles
DUNGENESS STATE SALMON HATCHERY 1261 FISH HATCHERY RD SEQUIM, WA 98382 Latitude: 48.027502 Longitude: -123.14027						View Report		View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land:

Summary Report Facility Report Compliance Report											3.25605 miles
ECYCLE NW SEQUIM 272693 HIGHWAY 101 SEQUIM, WA 98382 Latitude: 48.041835 Longitude: -122.982421 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.26137 miles
EKLUND SUBDIVISION N GALES STREET AND E 8TH AVE PORT ANGELES, WA 98362 Latitude: 48.10974 Longitude: -123.389028 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.50673 miles
EQUITY INVESTORS NORTHWEST INC 1000 5TH AVE S SEQUIM, WA 98382 Latitude: 48.07083 Longitude: -123.11312 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.67423 miles
ERICS AUTO ELECTRIC INC 275 S 7TH AVE SEQUIM, WA 98382 Latitude: 48.07834 Longitude: -123.11857 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.26799 miles
EVERGREEN COLLISION CENTER INC 216 N GALES PORT ANGELES, WA 98362-8731 Latitude: 48.106012 Longitude: -123.389133 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.53772 miles
FEDEX GROUND DISTRIBUTION CENTER EASY ST & DEER PARK RD PORT ANGELES, WA 98362 Latitude: 48.103 Longitude: -123.34544						View Report					Jamestown S'Klallam Tribe *Facility is located on

Summary Report Facility Report Compliance Report											the Tribal Land
FRED HILL MATERIALS PORT TOWNSEND 7915 HIGHWAY 20 PORT TOWNSEND, WA 98368 Latitude: 48.030667 Longitude: -122.827528 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 7.5186 miles
FRED HILL MATERIALS SEQUIM 1369 CAYS RD SEQUIM, WA 98382-8005 Latitude: 48.1305 Longitude: -123.167 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: .58595 miles
FREDS AUTO WRECKING 262 MT PLEASANT RD PORT ANGELES, WA 98362-8624 Latitude: 48.104378 Longitude: -123.382652 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.6684 miles
GADAMUS (LOG CABIN) 3830 W SEQUIM BAY RD SEQUIM, WA 98382 Latitude: 48.04848 Longitude: -123.03615 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
GOOD IMPRESSION DRY CLEANERS 609 W WASHINGTON UNIT 5 SEQUIM, WA 98382-3291 Latitude: 48.07972 Longitude: -123.11612 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.38959 miles
GULL INDUSTRIES INC 293 104 WASHINGTON ST SEQUIM, WA 98382-3336 Latitude: 48.07964 Longitude: -123.10208 Summary Report Facility Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land:

Compliance Report											2.02911 miles
HARD ROCK GARDINER PIT 1845 GARDINER BEACH RD GARDINER, WA 98382-8799 Latitude: 48.057181 Longitude: -122.940936 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 3.3234 miles
HOME DEPOT 8998 1145 W WASHINGTON SEQUIM, WA 98382-3270 Latitude: 48.07809 Longitude: -123.13103 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: .82707 miles
HOUSING DEVELOPMENT 257.512 HWY 101 PORT ANGELES, WA 98363 Latitude: 48.09084 Longitude: -123.24942 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 3.74071 miles
INTERLINE BRANDS DBA AMSAN PORT ANGELES 3310 E ACORN LN PORT ANGELES, WA 98362 Latitude: 48.10909 Longitude: -123.36623 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.47032 miles
JAKECO SOUTH BAGLEY CREEK RD PIT S BAGLEY CRK RD PORT ANGELES, WA 98362 Latitude: 48.072633 Longitude: -123.325981 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 7.35733 miles
JAMESTOWN S'KLALLAM TRIBE 1033 OLD BLYN HWY SEQUIM, WA 98382 Latitude: 48.02427 Longitude: -122.99642								View Report			Jamestown S'Klallam Tribe *Facility is located on

Summary Report Facility Report Compliance Report											the Tribal Land
JEFFERSON COUNTY INTERNATIONAL AIRPORT 310 AIRPORT RD PORT TOWNSEND, WA 98368 Latitude: 48.053172 Longitude: -122.80284 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.6716 miles
JEFFERSON COUNTY PUD 1 WATER 21 KENNEDY RD PORT HADLOCK, WA 98339 Latitude: 48.035456 Longitude: -122.784148 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.56664 miles
JEFFERSON TRANSIT AUTHORITY 63 FOUR CORNERS ROAD PORT TOWNSEND, WA 98368 Latitude: 48.049207 Longitude: -122.818505 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
JIMMY COME LATELY GAZETTE 147 1/2 W WASHINGTON SEQUIM, WA 98382-3337 Latitude: 48.079543 Longitude: -123.103767 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.9547 miles
JIMMYCOMELATELY/SEQUIM BAY LOG YARD 56 OLD BLYN HIGHWAY SEQUIM, WA 98382 Latitude: 48.024037 Longitude: -123.010878 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Distance from Tribal Land: .01282 miles
JOHN DOLAN 302 PRIMROSE LN SEQUIM, WA 98382 Latitude: 48.13696 Longitude:								View Report			Jamestown S'Klallam Tribe *Distance

-123.11594 Summary Report Facility Report Compliance Report											from Tribal Land: 1.37683 miles
KOENIG CHEVROLET SUBARU 3501 HWY 101E PORT ANGELES, WA 98362 Latitude: 48.106306 Longitude: -123.356583 Summary Report Facility Report Compliance Report			View Report					View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.06332 miles
LAKESIDE INDUSTRIES PORT TOWNSEND 4124 HASTINGS AVE PORT TOWNSEND, WA 98368 Latitude: 48.105152 Longitude: -122.859762 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.32575 miles
LONGHOUSE MARKET AND DELI 271020 HIGHWAY 101 SEQUIM, WA 98382 Latitude: 48.024708 Longitude: -122.995299 Summary Report Facility Report Compliance Report	View Report										Jamestown S'Klallam Tribe *Distance from Tribal Land: .0256 miles
MERRILL AND RING DEER PARK DEVELOPMENT GRAND RIDGE WAY PORT ANGELES, WA 98362 Latitude: 48.060875 Longitude: -123.323485 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.26024 miles
MEYER 183 SOPHUS RD SEQUIM, WA 98382 Latitude: 48.01789 Longitude: -123.00455 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
MEYER II 294 WOODS ROAD SEQUIM, WA 98382 Latitude: 48.0176 Longitude:		View Report									Jamestown S'Klallam Tribe *Distance from Tribal

-123.001 Summary Report Facility Report Compliance Report											Land: .02403 miles
MIDAS MUFFLER 3414 HWY 101 E PORT ANGELES, WA 98362-9048 Latitude: 48.10875 Longitude: -123.36231 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.29116 miles
MIDWAY METALS 258010 HWY 101 PORT ANGELES, WA 98362 Latitude: 48.08991 Longitude: -123.24124 Summary Report Facility Report Compliance Report						View Report		View Report			Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
MIDWAY TRANSMISSION & DRIVETRAIN 51 NORTH BARR ROAD PORT ANGELES, WA 98362-8484 Latitude: 48.090116 Longitude: -123.238554 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 3.3123 miles
MOUNTAIN VIEW NEAR 407 DUNGENESS MEADOWS SEQUIM, WA 98382 Latitude: 48.061646 Longitude: -123.148234 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Distance from Tribal Land: .562 miles
MT PLEASANT AUTO BODY & TOWING INC 20 MCCARVER ST PORT ANGELES, WA 98362-8619 Latitude: 48.10484 Longitude: -123.37022 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.68291 miles
NPBA RESIDENTIAL SUBDIVISION W 10TH ST APPR 400' W OF N ST PORT ANGELES, WA						View					Jamestown S'Klallam Tribe *Distance

98362 Latitude: 48.1297 Longitude: -123.151 Summary Report Facility Report Compliance Report						Report					from Tribal Land: 1.03492 miles
PAC FIVE 33 KNAPP RD SEQUIM, WA 98382 Latitude: 48.050709 Longitude: -122.962005 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.31323 miles
PACIFIC AEROSPACE AND ELECTRONICS INC SE 2249 DIAMOND POINT RD SEQUIM, WA 98382 Latitude: 48.07603 Longitude: -122.93666 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 4.40697 miles
PENSA CLEANERS SEQUIM 359 W WASHINGTON ST SEQUIM, WA 98382 Latitude: 48.07967 Longitude: -123.10939 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.69958 miles
PORT ANGELES SCHOOL DIST PTC 639 MONROE ROAD PORT ANGELES, WA 98362-9328 Latitude: 48.09586 Longitude: -123.38658 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.52466 miles
PORT TOWNSEND MOTORSPORT INC 211 FREDERICKS ST PORT TOWNSEND, WA 98368-9749 Latitude: 48.08817 Longitude: -122.81195 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.44544 miles
PRECISION TRUSS INC 61 LAKE FARM RD PORT											Jamestown S'Klallam Tribe

ANGELES, WA 98362 Latitude: 48.09834 Longitude: -123.32361 Summary Report Facility Report Compliance Report						View Report					*Distance from Tribal Land: 6.66412 miles
PRICE FORD DEALERSHIP 3303 E HWY 101 PORT ANGELES, WA 98362 Latitude: 48.107134 Longitude: -123.365896 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.46373 miles
PSE PORT TOWNSEND SVC 310 FOUR CORNERS RD PORT TOWNSEND, WA 98368 Latitude: 48.048627 Longitude: -122.813687 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.3671 miles
PUD ADMINISTRATION BUILDING 261032 HIGHWAY 101 SEQUIM, WA 98382 Latitude: 48.08048 Longitude: -123.17938 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
QUILCENE SCHOOL DIST HIGH SCHOOL 294715 HWY 101 QUILCENE, WA 98376 Latitude: 47.9678 Longitude: -122.882 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 6.19195 miles
QWEST BLYN TD2 RADIO BLDG 1.6 MI SE BLYN BLYN, WA 98382 Latitude: 48.003389 Longitude: -122.991667 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.03245 miles
QWEST CORPORATION W00425											Jamestown S'Klallam

635 OAKRIDGE DR PORT ANGELES, WA 98362-9055 Latitude: 48.11094 Longitude: -123.36538 Summary Report Facility Report Compliance Report								View Report			Tribe *Distance from Tribal Land: 8.37307 miles
RAYONIER MT PLEASANT LANDFILL MT PLEASANT ACCESS RD APPROX 0.6 MI PORT ANGELES, WA 98362-4504 Latitude: 48.095833 Longitude: -123.374611 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.83066 miles
REEF SEQUIM LLC / SEQUIM VILLAGE MRKTPLC SEC OF W WASHINGTON ST & RIVER RD SEQUIM, WA 98382 Latitude: 48.078613 Longitude: -123.124019 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.05575 miles
RESERVE AT DISCOVERY BAY 7401 CAPE GEORGE RD PORT TOWNSEND, WA 98368 Latitude: 48.05366 Longitude: -122.843058 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 7.13955 miles
RITE AID 5265 520 W WASHINGTON ST SEQUIM, WA 98382 Latitude: 48.07969 Longitude: -123.11403 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.35151 miles
RUSS AUTO TRUCK CLINIC 274 P OTTO STREET PORT TOWNSEND, WA 98368-9719 Latitude: 48.086722 Longitude: -122.816083 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.22309

											miles
RUSTYS FOREIGN AUTO REPAIR 3343 E HWY 101 PORT ANGELES, WA 98362-8751 Latitude: 48.107631 Longitude: -123.364811 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.4101 miles
SAFEWAY STORE 1448 680F W WASHINGTON ST SEQUIM, WA 98382 Latitude: 48.07608 Longitude: -123.14576 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
SAFEWAY STORE 1922 2709 E HWY 101 PORT ANGELES, WA 98362 Latitude: 48.104606 Longitude: -123.380741 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.16469 miles
SCOTTS SMALL CAR REPAIR 324 S BAYVIEW AVE PORT ANGELES, WA 98362 Latitude: 48.100983 Longitude: -123.378464 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.09563 miles
SELLENS PROPERTY 101 EBERLE LN SEQUIM, WA 98382 Latitude: 48.131494 Longitude: -123.119366 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.2971 miles
SEQUIM AUTO CLINIC 425 E WASHINGTON ST SEQUIM, WA 98382 Latitude: 48.07964 Longitude: -123.09693 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.2883 miles

SEQUIM AUTO CLINIC INC 887 E WASHINGTON ST SEQUIM, WA 98382 Latitude: 48.07747 Longitude: -123.08907 Summary Report Facility Report Compliance Report			View Report					View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.62729 miles
SEQUIM BARREL SEQUIM FIRE DEPT SEQUIM, WA 98382 Latitude: 48.078861 Longitude: -123.097694 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.23887 miles
SEQUIM CITY SHOP 701 S SEQUIM AVE SEQUIM, WA 98382 Latitude: 48.07263 Longitude: -123.10237 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.13548 miles
SEQUIM DRUG LAB 111 SMITHFIELD RD SEQUIM, WA 98382 Latitude: 48.080994 Longitude: -123.170015 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: .66499 miles
SEQUIM WATER RECLAMATION FACILITY 247 SCHMUCK RD SEQUIM, WA 98382 Latitude: 48.084852 Longitude: -123.063322 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.49274 miles
SOLANA SW OF SIMDARS & BROWNFIELD RD SEQUIM, WA 98382 Latitude: 48.0644 Longitude: -123.1 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.27501 miles

SOPHUS ROAD 180 SOPHUS ROAD SEQUIM, WA 98382 Latitude: 48.01784 Longitude: -123.00454 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
SOPHUS ROAD AND MEYER 20 SOPHUS ROAD SEQUIM, WA 98382 Latitude: 48.02009 Longitude: -123.00463 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
SOUTHERN VIEW 1061 MEDSKER RD SEQUIM, WA 98382 Latitude: 48.10501 Longitude: -123.08061 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.2667 miles
UNITED PARCEL SERVICE WAPOR 3306 HWY 101 E PORT ANGELES, WA 98362 Latitude: 48.105 Longitude: -123.381943 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.47086 miles
UPS DISCOVERY BAY 4770 S DISCOVERY RD PORT TOWNSEND, WA 983689676 Latitude: 48.04958 Longitude: -122.82196 Summary Report Facility Report Compliance Report			View Report					View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 7.93148 miles
UPS PORT ANGELES 3216 E HWY 101 PORT ANGELES, WA 98362-9073 Latitude: 48.105761 Longitude: -123.368919 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.61354 miles
US101 SR104 DRUMS											Jamestown S'Klallam

US 101 AND STATE ROUTE 104 QUILCENE, WA 98376 Latitude: 47.956389 Longitude: -122.884056 Summary Report Facility Report Compliance Report								View Report			Tribe *Distance from Tribal Land: 6.61732 miles
USWCOM SEQUIM CO 144 W BELL ST SEQUIM, WA 98382 Latitude: 48.07877 Longitude: -123.10389 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.95939 miles
VALASKE - AKA DICKEY BIRDS 43 SOPHUS RD SEQUIM, WA 98382 Latitude: 48.019956 Longitude: -123.00323 Summary Report Facility Report Compliance Report		View Report									Jamestown S'Klallam Tribe *Facility is located on the Tribal Land
WA AGR CLALLAM 1 130 GRANT ROAD BUILDING 5 SEQUIM, WA 98382 Latitude: 48.076088 Longitude: -123.137317 Summary Report Facility Report Compliance Report			View Report					View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: .63861 miles
WA AGR JEFFERSON 1 9884 HWY 19 CHIMACUM, WA 98325 Latitude: 48.0188 Longitude: -122.776 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 9.89543 miles
WA DOT PIT Q161 SR 101 MP 256 RIGHT PORT ANGELES, WA 98362 Latitude: 48.101417 Longitude: -123.340472 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 7.36275 miles
WA DOT PIT Q83											Jamestown

100 WOODS RD BLYN, WA 98382 Latitude: 48.00295 Longitude: -123.00429 Summary Report Facility Report Compliance Report								View Report			S'Klallam Tribe *Distance from Tribal Land: .8849 miles
WA DOT US 101 SHORE RD TO KITCHEN DICK RD WIDENING US 101 SEQUIM, WA 98382 Latitude: 48.08349 Longitude: -123.194734 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 4.15642 miles
WAL MART 5273 1284 W WASHINGTON ST SEQUIM, WA 98382-3270 Latitude: 48.077703 Longitude: -123.133804 Summary Report Facility Report Compliance Report						View Report		View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: .67745 miles
WAL MART SUPERCENTER 2196 3471 E KOLONELS WAY PORT ANGELES, WA 98362 Latitude: 48.10996 Longitude: -123.36031 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.16946 miles
WAL MART SUPERCENTER 2196-02 3500 E HIGHWAY 101 PORT ANGELES, WA 98362 Latitude: 48.10922 Longitude: -123.35917 Summary Report Facility Report Compliance Report						View Report		View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 8.19251 miles
WALGREENS 10926 490 W WASHINGTON ST SEQUIM, WA 98382 Latitude: 48.080124 Longitude: -123.112592 Summary Report Facility Report Compliance Report								View Report			Jamestown S'Klallam Tribe *Distance from Tribal Land: 1.54994 miles
WASHINGTON HARBOR											Jamestown

ESTUARY RESTORATION 1071 WASHINGTON HARBOR RD SEQUIM, WA 98382 Latitude: 48.080288 Longitude: -123.046608 Summary Report Facility Report Compliance Report						View Report					S'Klallam Tribe *Distance from Tribal Land: 2.0942 miles
WASHINGTON STREET PLAZA E OF RHODEFFER RD SIMDARS RD SEQUIM, WA 98382 Latitude: 48.0711 Longitude: -123.073 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.08928 miles
WILLOW CREEK MANOR LOTS RHODEFER RD & BROADMOOR ST SEQUIM, WA 98382 Latitude: 48.07998 Longitude: -123.08055 Summary Report Facility Report Compliance Report						View Report					Jamestown S'Klallam Tribe *Distance from Tribal Land: 2.77201 miles

Total Number of Facilities Retrieved: 120

EPA makes no claims regarding the accuracy or precision of data concerning Indian country locations or boundaries on the Envirofacts website. EPA has simply attempted to collect certain readily available information relating to Indian country locations. Questions concerning data should be referred to the originating program or Agency which can be identified in the Envirofacts tribal query metadata files Lower48 Tribal Areas, Alaska Reservation, Alaska Native Villages, or Alaska Native Allotments . The Indian country locations shown here are suitable only for general spatial reference and do not necessarily reflect EPA's position on any Indian country locations or boundaries or the land status of any specific location. The inclusion of Indian country information on the Envirofacts website does not represent any final EPA action addressing Indian country locations or boundaries. This information cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States or third parties. EPA reserves the right to change information on Envirofacts at any time without public notice.

EPA uses the US Census Bureau 2016 tribal boundary layer data when developing environmental data query responses for tribes in the lower 48 United States. The tribal boundary locations identified are suitable only for general spatial reference and do not necessarily reflect EPA's position on any Indian country locations or boundaries, or the land status of any specific location. EPA seeks to use the best available national federal data and may refine the tribal boundary layer in the future as more accurate national federal data becomes available.