



# SWINOMISH CLIMATE CHANGE INITIATIVE: At the Forefront of Planning for Climate Change

## Background

In 2007, the Swinomish Tribe passed a Climate Change proclamation in response to growing concerns about potential impacts of climate change on the Swinomish Indian Reservation. The motivation behind this proclamation related directly to recognition within the region about the potential impacts from climate change, the increase of climate-related natural disasters around the world, and the growing knowledge and observations about climate change among the scientific community.

Regionally, the lower Skagit River area was identified as one of two high-risk areas within the state for sea level rise, and local events such as severe storms and flooding from tidal surges also prompted concern. These events served as a catalyst for developing projects and research to more thoroughly examine climate change issues and potential responses. The Proclamation promised to develop, strategize, and take actions necessary to assess the potential impacts of climate change on the Reservation community and resources. To further this goal, the Swinomish Tribe launched a climate change initiative in 2008 and began conducting research to determine the risks posed to the tribe in regards to health, culture, the built environment, and the natural environment.

## Projected Climate Change Impacts for the Swinomish Tribe

In 2009, the tribe completed an impact assessment that examined a broad range of issues and sectors for potential climate change impacts from effects such as sea level rise and rising temperatures. The assessment found that many assets and resources within the Swinomish Indian Reservation would be impacted, in addition to impacts on public health and tribal traditions. The assessment found that approximately 15% of Swinomish tribe land is at risk of inundation from rising sea level, potentially threatening the Tribe's primary economic development land in which current enterprises are located, in addition to potential impacts on tribal agricultural land, shellfish beds, fishing docks, and private residential development. In addition, the assessment found that upland areas containing extensive forest resources and developed property worth over \$518 million may be at risk from potentially destructive wildfire.

The tribe's historic and cultural reliance on many traditionally used resources is at risk due to a multitude of climate change impacts. For several hundred years, the tribe has relied on salmon fishing, shellfish harvesting, and other marine resources, as part of their significant cultural tradition. The beaches and water that surround the reservation are considered to be an important traditional resource for the tribe. The tribe's economic and cultural reliance on fish and water is at risk due to rising sea levels as a result of global warming. This has spurred the Tribe to take action against the threat of sea level rise and biological diversity loss. The tribe has been performing water quality monitoring for a number of years, and intends to perform monitoring of impacts such as species loss, sea level rise, and fish stocks to gather necessary information to guide policy changes. Additionally, the impact assessment found that there is the potential for respiratory diseases, heat illnesses, and the possibility of infectious diseases as a result of climate change.



## Project Implementation

The Swinomish Tribe has been at the forefront nationally in addressing climate change adaptation. The Swinomish Climate Change Initiative has been highlighted at tribal conferences, national websites, newsletters and other venues as a model for assessing the impacts from climate change and developing a climate change adaptation plan. The Swinomish Tribe secured 80% of project funding (\$400,000) from the Administration for Native Americans. The remaining 20% came from Tribal funds.



Aerial view of Swinomish Indian Reservation and La Conner vicinity (Swinomish Indian Tribe).

The model developed by the Swinomish Tribe focuses on building an understanding of climate change impacts in order to identify strategies for climate change adaptation. The Swinomish Tribe began preliminary efforts in 2007 to identify the scope of climate change issues. The Tribe began by gaining buy-in from tribal leaders through the proclamation, and then began to assess capacity and needs internally, as well as opportunity for collaboration with external partners. After defining their approach and methods, the Tribe began work on the Impact Assessment Technical Report, which was completed in 2009. This assessment provides a baseline of information the Tribe is using to develop the climate change adaptation action plan.

## Swinomish Climate Change Initiative – Planning Process

### Phase 1 (2007 – 2009)

- Tribal buy-in leads to issuance of the 2007 Climate Change Proclamation
- Secure funding
- Identification of partners, development of advisory committee and identification of roles and responsibilities
- Development of the Impact assessment
  - Data review/analysis
  - Risk zone mapping/inventory
  - Vulnerability assessment
  - Risk analysis
- Policy/strategy scoping (intergovernmental)
- Community Outreach
  - Formed tribal outreach group
  - Held public meetings
  - Conducted personal interviews of tribal members & elders
  - Conducted storytelling workshop with tribal members

### Phase 2 (2010)

Development of the Action plan

- Adaptation goals
- Strategy evaluation & priorities
- Action recommendations
- Coordination, funding needs
- Other implementation issues

### Phase 3 (future work)

- Action Plan Implementation
- Monitoring and Adaptive Management
- Update of the Impact Assessment

## Project Successes and Challenges

The Tribe encountered numerous challenges and learned valuable lessons through this Initiative. Specific challenges have included the complexity of the subject and analysis of scientific data, working on an unfamiliar process and communication with diverse partners, and competing priorities. Those working on the Initiative have recognized that each step informs the next, which has called for thorough

work, peer review and a strong understanding of findings among all partners and staff. Perhaps the most important lesson, however, has been that those working on the Initiative keep in mind that they are working for the future, and that while results of these efforts will likely not be seen by this generation, they are indeed working for future generations.

### Next Steps: Action Plan Development

Efforts under the Swinomish Climate Change Initiative are focused on completion of the Adaptation Action Plan, which the Tribe anticipates by the end of 2010. The action plan will include a summary of the impact and risk analysis and include adaptation goals and objectives, strategy options and evaluation criteria. Action recommendations and priorities will focus on Coastal Resources, Upland Resources, Community Integrity and Health, and Community Infrastructure. Action Plan Implementation will include policy considerations, community involvement, fiscal impact and funding requirements, organizational capacity, inter-jurisdictional coordination, monitoring and adaptive response, and mitigation activities.

### Key Partners

The Swinomish Climate Change Initiative has relied on the participation and input of tribal community members, neighboring jurisdictions, public and private entities, and scientific researchers. Partners are highlighted in the table below.

Partner Organization	Partnership Role
Center for Science in the Earth System University of Washington / Climate Impacts Group	Professional scientific review and advisory service
Skagit County	Neighboring jurisdiction with interests in common, participation in advisory group
Skagit River System Cooperative	As fisheries branch of Tribe, advise on local conditions, projections and climate research data
Town of LaConner	Neighboring jurisdiction with interests in common, participation in advisory group
Shelter Bay Community	On-Reservation residential community in low-lying area, participation in advisory group
Administration for Native Americans	Grant funding agency

### References and Resources

- Swinomish Climate Change Initiative: [http://www.swinomish-nsn.gov/climate\\_change/climate\\_main.html](http://www.swinomish-nsn.gov/climate_change/climate_main.html)
- Swinomish Climate Change Initiative -- Impact Assessment Technical Report: [http://www.swinomish-nsn.gov/climate\\_change/project/reports.html](http://www.swinomish-nsn.gov/climate_change/project/reports.html)

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### ***Tribal Climate Change Profile Project:***

The University of Oregon and the USDA Forest Service Pacific Northwest Research Station are embarking on a project to develop tribal climate change project profiles as a pathway to increasing knowledge among tribal and non-tribal organizations interested in learning about climate change mitigation and adaptation efforts. Each profile will illustrate innovative approaches to addressing climate change challenges and will describe the successes and lessons learned associated with planning and implementation. Funding to develop this project profile was provided by the USDA Forest Service Pacific Northwest Research Station. For more information, contact:

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