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## Environmental Interpretation Plan for the Pacific Northwest National Scenic Trail

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**ENVIRONMENTAL INTERPRETATION PLAN FOR THE PACIFIC NORTHWEST  
NATIONAL SCENIC TRAIL**

**By**

**Rosalie Matsumoto**

**Accepted in Partial Completion  
Of the Requirements for the Degree  
Master of Education**

**Huxley College of the Environment  
Western Washington University  
Bellingham, Washington, U.S.A.  
March 14, 2018**

**ADVISORY COMMITTEE**

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**Professor Wendy Walker**

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## Introduction

As lead researcher and developer of the Interpretation Plan for the Pacific Northwest National Scenic Trail, this document will detail the background, research, and process involved to develop such a plan for the US Forest Service. I will first conceptualize Interpretation as a profession and its relation to and with Environmental Education with supporting research to help give context to the next section: an introduction to my project. After introducing the Interpretation Plan, I will detail my work and process to develop the Foundational Information, or the core of the Plan. Finally, I will conclude with my challenges, learnings, and lessons from this project. In addition, there will be an appendix that includes the actual Interpretation Plan for the Pacific Northwest National Scenic Trail.

## Conceptual Environmental Education Background

Interpretation is nothing new to humankind. Since time immemorial, interpretation has been a way of life to passed down knowledge and stories. But since 1957 when Freeman Tilden published *Interpreting our Heritage*, the professional field of interpretation has gained a lot of attention and has become a norm at tourism sites around the world such as parks, museums, zoos, botanical gardens, and even wineries. Tilden was hired by the US Park Service in the 1950s to help mount a response to environmental degradation, recognizing that official designation of public land is not enough to conserve and protect such wild places. Tilden researched the value of education and interpretation as a means to conserving and protecting the natural and cultural resources of the US, and laid the foundational work for interpretation as we know it today. One does not need to look far to find Tilden's infamous quote, "Through interpretation, understanding; through understanding, appreciation; through appreciation, protection" (1957). Many of Tilden's main principles regarding interpretation are still very relevant, including the idea that interpretation should be provocative rather than instructional, that it should aim to present a whole rather than a part, that interpretation is an art and should be treated as such, and that it is relatable and relevant to visitors (Tilden, 1957).

Sam Ham, a scholar-practitioner of environmental interpretation, supports and employs Tilden's principles in publications such as "Can interpretation really make a difference?" (2007)," "From Interpretation to Protection: Is There a Theoretical Basis?" (2009), and "Interpretation: Making a Difference on Purpose" (2016). Ham validates Tilden's famous quote about interpretation through an analysis of contemporary cognitive and social psychological theories (2009, p. 49). Long-term research on the interpretive program planning process is scant however, and thus "successful" interpretation planning is not well described in the literature.

A few examples of studies I found on interpretation include Hughes' article on the impacts of a wildlife viewing interpretive program as it associates to long-term behavior change (Hughes, 2013); Hvenegaard examined the knowledge, attitudes, and behavioral intentions of attendees and non-attendees of an environmental interpretive program (Hvenegaard, 2016); and Munro et al. dissected the validity of evaluative studies of numerous interpretation programs (Munro et al., 2008). While not directly related to the planning process of developing an interpretation program, these articles helped me understand that a one-size-fits-all methodology to guarantee success does not exist for interpretive programming. All of these authors agree that there are many considerations such as prior knowledge and experience, perceived understanding, location, relevance, and timeliness that all contribute to reaching intended outcomes. These factors cannot be controlled in free-choice learning settings, but can be to some extent taken into account.

Russell Staiff et al. (2002) take a different approach in their article, *Interpretation in National Parks: Some Critical Questions*. The authors analyze the content, rather than the program implementation, and critically reflect on the ownership/custodianship of a protected National Park in Australia where there is a large presence of Indigenous Peoples and long history of conflict with settlers. They critique the interpretive program for how its messages portray and the cultural, social, and ecological history of the place (Staiff et al., 2002). This article has been particularly important for me as the interpretation plan I develop for the trail traverses through traditional grounds of many different Indigenous Tribes.

In addition to researching peer-reviewed publications focused on environmental interpretation, staying up to date with the National Association for Interpretation (NAI) has been important in understanding the latest movements and trends that are progressing the field of interpretation forward. This non-profit organization was founded in 1988 through the merger of two separate interpretation organizations to expand their reach through networking, training, and collaboration. Today, the NAI has

over 6,000 members from across the globe including park rangers, interpreters, naturalists, historians, program directors, tour operators, planners, and other professionals.

## Description of Interpretation Plan

I was recommended by Professor Wendy Walker of Western Washington University in 2016 to the advisory committee responsible for developing a Comprehensive Plan for the Pacific Northwest National Scenic Trail (PNNST). Organized and led by the Forest Service in partnership with the Pacific Northwest Trail Association (PNTA), the Comprehensive Plan will outline rules, regulations, accessibility, trail types, managing organizations, interpretation and more for the PNNST. As a member of the education and interpretation sub-committee, I was the lead researcher and writer for the Interpretation Plan that would help guide future interpretive and educational programming for the trail.

The PNNST is 1200 miles long trail stretches from Glacier National Park in Montana to Cape Alava in Washington on the Olympic Peninsula and is largely managed by the PNTA, a non-profit dedicated to trail maintenance, information, outreach, and advocacy. The Planning Committee for the trail is comprised of PNTA members, Forest Service workers, and many other volunteers from all around the Pacific Northwest. For my work, I will consider the Idaho and central/western Montana as part of the Pacific Northwest since most rivers and tributaries on the trail flow into the Pacific Ocean.

In October of 2016, a two-day conference for Committee members and the public was held in Whitefish, Montana. I attended and was able to talk about the purpose of the interpretation plan, to network with knowledgeable professionals in all types of fields, and to learn what was most important to stakeholders regarding cultural and natural resources on and near the PNNST.

Working alongside Bonnie Lippit, the Interpretation Specialist for the Pacific Northwest region of the Forest Service has been an invaluable opportunity due to her knowledge and extensive experience in interpretation. However, I was not prepared for the restrictions and limitations imposed by a government

organization. Standards and guidelines for interpretation plans set by the Forest Service have helped me through the process since the scale of the trail is so large, but have also created some barriers that conflict with my personal morals. Starting my work with the Forest Service right before the 2016 presidential election created some challenges because funding and hiring of new employees within the Forest Service were temporarily halted at that time. The Committee was unable to meet in 2017 as planned, and government employees have been trying to play catch-up due to the inability to replace an important asset of the team. These events created numerous challenges for my development of the interpretation plan, but overall, the process has helped me learn how to navigate through bureaucracy and advocate for change which is important work as both an educator and environmentalist.

Studying other interpretation plans for National and State Parks, Historic Monuments, and Scenic Trails, it quickly became evident that Native Americans are simply left out of these types of documents as well as the planning process. While each interpretive site has different stories to tell and different populations to serve, it's important to critically recognize the interests of these organizations that do interpretive work. As with all education, somebody out there gets to decide *what* is learned, and *how* it's portrayed. I was bothered by the lack of honor for the traditional Tribal grounds of these sites I was reading about. As lead researcher for the interpretation plan for the PNNST, I tried making contact with Tribal Historic Preservation Officers for various Tribes that have long existed where the trail is routed to inquire about the process of including Native voices and narratives into the document. After getting a response from only one of the nine representatives I contacted, I felt I had a better understanding of the continued distrust that Indigenous Peoples have towards the government. Certainly there are many possible reasons for not getting calls or e-mails back, but after generations of murder, relocation, and cultural genocide, why would they want to work alongside the descendants of those who took their land and livelihood?

As a half Japanese and half White woman whose grandparents were interned at Camp Minidoka during the second World War, my relationship with issues of land ownership and discrimination is complex and therefore I am passionate about working towards inclusion, truth, and transparency in my work in environmental education. I do not have a solution to this problem of White dominance and erasure of history within our government, but I do know I have a duty to use my privilege in this position to work towards making reparations. What we can do is *continually* work to include Indigenous Representatives in all planning and decision making processes regarding land use and management. I have recommended to Matt McGrath, the program manager of the PNNST, to see about including Indigenous representatives as part of the planning committee but did not get much input back. As my participation on the committee extends beyond graduation, I intend to continue my advocacy and outreach for the inclusion of Indigenous voices in all parts of the Comprehensive Plan, including the Interpretation Plan.

Going back to the concept that somebody out there gets to decide what gets taught about in education, I have made contact with as many different people as possible in an attempt to be unbiased in what information goes into the interpretation plan. From equestrians, thru-hikers, and mountain bikers, to forestry workers, biologists, and Tribal Historic Preservation Officers, I spent over a year gathering and sorting through facts and stories that were most important to our stakeholders. With loads of information to work with, the drafting process of the Interpretation Plan began.

## Developing the Plan

Creating an Interpretation Plan is very different than creating an interpretive program, and I only had experience developing short programs. The Forest Service has a rough template to follow for their interpretation documents to ensure consistency. Most plans I reviewed are ordered similarly, beginning with a section on Foundational Information which includes a description of the interpretive site, the

purpose and need for a plan, statements of significance, interpretive themes, interpretive audiences, and interpretive objectives. Often included as well are management goals for interpretation, plan implementation, monitoring and evaluations, types of interpretive media, and suggested sites for interpretation. Because these types of government documents must go through many reviews and edits, I was not able to develop the interpretation plan quite as thoroughly as I had envisioned but am pleased with my efforts to have some components approved to be included in the document.

What makes this interpretation plan for the PNNST unique is the time, space, and scale that the trail covers. Interpretive programs are most often site-specific and/or pertain to singular historical events. The PNNST, however, traverses through seven National Forests, three National Parks, historic trail communities, highways, and even a ferryboat ride across the Puget Sound, providing a trail experience that intentionally connects visitors with other people and settled communities. Through studying environmental education in undergraduate and graduate school, I developed a philosophy that humans must be considered as a part of nature and the environment, particularly as we promote stewardship in environmental education. As I developed statements of significance, interpretive themes, and interpretive objectives for the plan, I kept this philosophy in mind because the human aspect is a major contributor to what makes the PNNST unique.

While I was familiar with developing themes and objectives in environmental education, creating “statements of significance” meant something quite distinct and was brand new to me. I learned that these statements are facts that help guide the themes and objectives, and are *significantly* unique to that area. This concept was difficult to fully understand at first. Who gets to decide what is the most important and significant attributes of a place? But in talking more with Bonnie Lippit and studying interpretation plans more closely, I began to see these statements of significance should always. With so much information to sort through, I developed statements for the overall trail and also divided these statements of significance into separate ecoregions: Montana, Idaho/Eastern Washington, central/western

Washington, and the Olympic Peninsula. The biggest challenge of this part was trying to include everyone's voices while distilling out what is truly significant compared to other National Scenic Trails and places around the world. In understanding that everyone recreates outdoors for different reasons, and to capture the essence of the PNNST, I tried to include a great variety of significances related to wildlife, ecology, biology, geology, archaeology, pre-settlement history, and post-settlement history.

As Bonnie Lippit and I refined the significance statements and began thinking about themes for the interpretation plan, I realized the similarity to lesson planning for environmental education, and that these statements of significance are the content for my "curriculum." But planning an interpretation plan rather than a curriculum for environmental education requires a different thought process. In interpretive programs, interpreters are typically dealing with short term, non-captive audiences that are there because they *want* to be there. Environmental education, on the other hand, usually works with captive audiences who have external motivators to be there, and the audience can be revisited to build on previous lessons. In addition, environmental education must often meet state or federal education standards whereas interpretation has a bit more flexibility and freedom depending on the interests and goals of the organization or agency.

With all of these considerations in mind, developing interpretive themes proved to be a trickier task than I anticipated. After numerous phone conversations with Bonnie Lippit and reading articles by Sam Ham on thematic interpretation (2007, 2009), I at least understood that creating strong themes that associate with the statements of significance is what helps visitors make meaning out of the factual information provided. But in order for visitors to make meaning out of the information, there needs to be some sort of *feeling* involved. There needs to be components that allows for personal connections and evokes provocative thinking. Going back to Tilden's famous quote, "Through interpretation, understanding; through understanding, appreciation; through appreciation, protection (1957)": interpretive themes are what help visitors go from understanding to appreciation.

How exactly does one create meaningful themes when they've never experienced the place? In my case, I went back to those who *have* experienced the PNNST and have a personal connection to it. I sent out e-mails to all of our stakeholders to find out what types of feelings and emotions they experience when hiking the trail or how they feel living in a community that the trail passes through. With a solid list of what the Forest Service refers to as “intangibles,” I met with Bonnie Lippit and Becky Blanchard of the Pacific Northwest Region in Portland, Oregon, for an intensive brainstorming session to organize and make sense of the intangibles that would guide the development of our interpretive themes.

Hours later, we came away with four overarching interpretive themes. Each significance statement could resonate with one or more. The four thematic topics we came up with related to The Hiking Experience, The Physical Environment, A Walk Through History and Time, and Lessons and Inspiration for Conservation. From an outside perspective, however, the interpretive themes appear meaningless without their relationships to the statements of significance. I hope to incorporate subthemes due to the grand scale of the trail and for future interpreters to understand the value of utilizing themes in order to help the visitors create meaning out of the information.

With the significance statements and interpretive themes mostly refined, I began identifying the different audience types that are likely to visit part or all of the PNNST. Understanding the audience is crucial to a successful interpretive program as to not bore, confuse, offend, or disrespect the visitors. As my analyses of the different audiences developed, interpretive objectives started to flow out naturally. In education, objectives typically refer to what the audience knows, feels, believes, or does by the end of an activity or program. Many interpretive documents have separate sections for the Audience Analysis and the Interpretive Objectives, but for this plan, it made most sense identify the objectives as they pertain to the audience types since the audiences vary greatly along such a large transect of the trail. Again, I reached out to our stakeholders to find out what they felt was absolutely necessary for trail visitors and local community members to know, feel, believe, or do.

Finalizing and getting the Audience Analysis and Interpretive Objectives approved by the Forest Service was a fantastic feeling. With a little more editing, refining, and another check-in with the Forest Service, the Foundational Information for the interpretation plan was nearly complete! Looking in from outside, the development of significance statements, interpretive themes, audience analysis, and interpretive objectives may not seem like much, but laying this groundwork for the actual interpretive programming that will eventually occur is necessary and requires extensive research, communication, and time. Additionally, the Comprehensive Plan for the PNNST is likely to be one of the most extensive of plans developed by the Forest Service because of the scale of the trail, the numerous organizing bodies that manage different parts of the trail, and the variety and spread of committee members involved.

My involvement with the Forest Service will continue beyond graduation as we work towards our next steps of creating management goals, site-designations, media types, monitoring, and evaluations for interpretive programming. As we move into the next stage of the interpretation plan, I now see why the foundational information needed to be done first. When I was first brought on to the committee, I immediately wanted to begin designating sites for interpretation opportunities without thinking of the purpose and essence of the actual trail. Bonnie has been an excellent mentor in redirecting my thinking and approach to be about the PNNST and trail experience, rather than the Pacific Northwest in general. Being actively involved in the planning process of an interpretation plan is an entirely different and challenging experience than developing a site-specific interpretation program. I have been both humbled and inspired by this opportunity and look forward to utilizing my new knowledge and skills to continue progressing Environmental Education and Interpretation forward.

## Learnings and Lessons

The challenges and obstacles I faced throughout my masters project came as a surprise because my educational background was focused on Environmental Education, rather than Interpretation. I

understood the limitations imposed on teachers in public school settings, but was much less prepared for the process and pace at which a government agency can move. Our first committee meeting in Whitefish, Montana, gave me a glimpse into why it can be painstakingly difficult to come to a group consensus, particularly regarding issues of land management. A session on the verbiage of the Nature and Purposes Statement for the Comprehensive Plan that was set for 30 minutes turned into a two hour argument that was never actually resolved by the end of the two-day conference. Although it was difficult to sit through, I was glad to see such a professionally diverse group of people with fundamentally different values work towards a compromise (or attempt to!) for a plan that impacts many people.

What gave me hope was the passion of the committee members and their desire to see this Comprehensive Plan come to fruition. By the time I was given the opportunity to speak about the interpretation plan, the committee was excited to provide their wealth of knowledge and put me in contact with other professionals. An important lesson I learned from this is to be confident, thorough, and to not be afraid to check back in consistently with others. With the Forest Service being understaffed and committee members volunteering their time, I had to stay persistent in getting the help and guidance needed to keep the interpretation plan moving forward.

In addition to the obstacles presented by bureaucracy, it seems there are a limited amount of long-term studies on the process of interpretive planning. Some articles on interpretive programs did guide my development of interpretive audiences for the PNNST and got me thinking about the implementation process, but I hope to see more scholarly work (or participate in!) in the future focusing on the planning process of interpretation. As my work with the Forest Service continues beyond graduation, I hope to find more research on collaborative land management and on large-scale planning projects in general, such as for city planning.

White dominance and the erasure of history was the biggest internal struggle I found myself working against. As a hiker and outdoor enthusiast, I am thankful for the abundant trails and land that has

been set aside for protection, but am also very aware of our country's violent history and continued oppression towards Indigenous populations. Because I had agreed to the Forest Service's contract, I have followed the agency's guidelines of interpretation plans with some respectful pushback, such as vying for a section that recognizes local Indigenous Tribes.

## Conclusion

While Interpretation and Environmental Education have many differences and philosophical foundations, many bridges can be built to connect the two for more effective planning and programming.. When Tilden writes of enjoyment, relevancy, organization, and themes as key components to good interpretation, it is important to recognize these as key components to any educational setting (Tilden, 1957). With a more extensive background in Environmental Education, this project has allowed me to better visualize and understand the benefits of interpretive techniques that I will carry with me in any professional field I may go into.

The following section of this document are appendices of the actual Interpretation Plan for the Pacific Northwest National Scenic Trail. Appendix I includes the Foundational Information of the Plan, and Appendix II includes significant storyline ideas that did not make it into the actual Interpretation Plan. It was important to create an additional document that includes the valuable information provided by our many stakeholders to ensure everyone knows their voices have been heard and for future interpretive programming ideas.

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Appendix I: Interpretation Plan for the PNNST

U.S. Forest Service  
Pacific Northwest National Scenic Trail



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**Pacific Northwest National Scenic Trail**  
*Interpretation and Education Plan*

# **Pacific Northwest National Scenic Trail**

## *Interpretation and Education Plan*

Prepared by the U.S. Forest Service  
Pacific Northwest Trail Association  
and  
Western Washington University

August 2017

U.S. Forest Service

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# INTRODUCTION

## **Description**

Designated as a National Scenic Trail in 2009, The Pacific Northwest National Scenic Trail (PNNST) traverses 1,200 miles between the Continental Divide of Glacier National Park in Montana, and Cape Alava on the Olympic Peninsula of Washington State. From rugged mountain peaks to dense forest valleys, and from small historic trail towns to rocky intertidal beaches, the trail offers a spectacular variety of experiences as it passes through three National Parks and seven National Forests.

The Pacific Northwest National Scenic Interpretation Plan serves as the foundation of interpretation and education programs along the trail in all three states: Montana, Idaho, and Washington. The plan is designed to guide interpretive and educational programs to increase visitor appreciation and knowledge of the Pacific Northwest National Scenic Trail and its resources.

## **Purpose**

As defined by the National Park Service, National Scenic Trails are “extended trails so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass.” A comprehensive plan that outlines management goals, rules, regulations, and education is required with the designation of a National Scenic Trail. Because designation does not guarantee permanent protection, development of an Interpretation and Education Plan will identify the significant cultural and natural resources, connect visitors to those resources, and instill in them a sense of appreciation.

## **The National Trails System Act**

United States Congress enacted the National Trails System Act in 1968 that would provide the means for promoting and preserving outdoor areas and historic resources of the United States due to increasing outdoor recreation and population growth. The act and its amendments provides a national system of trails and defines trails into 4 different classes: National Scenic Trails, National Historic Trails, National Recreation Trails, and connecting or side trails.

## **National Scenic Trails**

As defined by the Bureau of Land Management, “National Scenic Trails are extended trails (100+ mi) that provide maximum outdoor recreation potential and for the conservation and enjoyment of the various qualities – scenic, historical, natural, and cultural – of the areas they pass through.”

## Statements of Significance

Statements of significance clearly define the most important things about the Pacific Northwest National Scenic Trail's resources and values. They serve as the foundation for developing primary interpretive themes and encouraging desirable visitor behaviors. Significance statements help managers and staff focus on the preservation and enjoyment of those attributes that directly contribute to the unique character of the trail and the role the varying regions play on the trail.

## Overflight of the Pacific Northwest National Scenic Trail

*Adopted from Jon Kohl, director of the PUP Global Heritage Consortium, dedicated to the professional development of interpretation. Kohl advocates for creative writing within interpretive documents as a way to actually interpret the plan itself.*

Hiking the Pacific Northwest National Scenic Trail is a special and unforgettable experience, meandering through the natural splendor of the Pacific Northwest, defined by its temperate climate and abundance of water. Hiking the trail, however, only offers a partial view of the PNNST's grandeur. If we take a look from above, as if from an eagle's point of view, the full picture and story emerges. As we embark on our unique journey *over* the PNNST, we remember and respect the footsteps that Native Americans have traveled and honor their intimate connection that has been held with the Pacific Northwest for thousands of years.

We begin our journey by catching an upward draft from the Belly River Valley east of the Rockies in Glacier National Park, lifting us up and over the continental divide; the great "Crown of the Continent" providing picturesque views of the jagged, snow-tipped mountain peaks in all directions. As we soar westward down into the valleys of the Rockies, we catch rare glimpses of wild grizzlies, moose, wolves, and mountain goats, following the rivers and tributaries that will flow all the way to the Pacific Ocean directly or indirectly via the Columbia River. If we catch the melting streams rushing into the high-country meadows at the right time, we just might catch the spectacular explosions of wildflowers that paint the mountain sides.

Continuing westward, we fly over the small mountain community of Polebridge, Montana, before witnessing one of the most remote areas of the United States within the Purcell Mountains. A unique microcosm of temperate rainforests provide critical habitat for the grizzlies that once roamed much of North America, and where Yaak Valley residents have long been fighting for the official protection of the area. Fire lookouts scatter the region with determined hikers taking in the epic panoramic views of Montana, Idaho, and even Canada. From above, the logging that occurs in Kootenai National Forest may not be as pleasing to the eye, but it reminds us of the long legacy of land management that has provided both livelihood for workers and the commodities we experience because of it.

As we move out of the temperate lowlands of western Montana and cross over the border into Idaho, we begin to fly upward again into the Selkirk Mountains which are home to the critically endangered woodland caribou. With our bird's eye view and a lot of luck, we may catch a sighting of one of the estimated 27 remaining woodland caribou left on earth. Wolverine, lynx, and the gray wolf are also unlikely to be seen without absolute care and awareness of the

surrounding areas. We come upon a clearing in the trees, finding the beauty of Upper Priest Lake in the northwestern corner of Idaho's panhandle. The lake is speckled with fishing boats and the shoreline offers a much needed reward for scrambling and bushwhacking hikers.

Continuing our flight, we are greeted with lush, temperate rainforests along the Idaho-Washington border, with plants and trees showing off their vibrant greens. Abercrombie Mountain offers the highest vantage point in the Selkirk Range of Eastern Washington with views of subalpine meadows scattered in bursting colors from indian paintbrush, purple lupine, and other magnificent wildflowers. Following the trail, we almost fly into Canadian territory as it meanders north of Metaline Falls, a small community with historic ties to mining in the region.

The Pacific Northwest's varied landscapes and ecoregions are well showcased as we really make our way into Eastern Washington. Rolling grasslands, open spaces, and drier rugged mountains are the result of Washington's rain shadow effect, where moisture from the Pacific Ocean is dumped onto the Olympics and Cascades, with little precipitation left available for lands east of the Cascade Mountains. From our point of view, the mighty Columbia River cannot be missed and looking closely, we might spot bighorn sheep, gray wolves, or black bears making their way through the dry landscape scattered in Ponderosa Pine. Old homesteads and cabins can also be found here in the Kettle River Range where the region was shaped largely by the gold rush.

We head towards the Pasayten Wilderness via the Okanogan Highlands, and it almost feels as if we've left the Pacific Northwest entirely. The desert-like conditions offer hot and dry summers with cold, snowy winters. Below, hikers move with caution to avoid rattlesnakes, but in hopes to catch glimpses of moose, elk, and deer that graze the open sagebrush parklands. Catching the hot, dry breezes, we float into the Okonogan River Valley where perfectly paralleled rows of apples, cherries, and other fruits are growing below, tended to by proud Oroville residents. Horseback riders also find solace in the equestrian trails available in the region, gently reminding us of the powerful connections humans have made with nature. Because mechanized equipment is not allowed in some wilderness areas here, equestrians play an important role in helping to maintain the trails.

The Pacific Northwest's varied ecoregions become glaringly obvious once again, as we can feel the cool, mountain air pushing against us as we rise into the rugged North Cascades where the most active glaciers in the lower 48 can be found. The quartz and feldspar that erode from the glaciers make their way into Ross Lake and Lake Diablo, offering to the eye some of the most mesmerizing greens, blues, teals, and turquoises that are well worth a break to take in the views. Our westward flight continues along the Skagit River and down the mountains and we are hit with moist air and ever-continuing precipitation, sensing the salty Salish Sea in our near future. From the Chuckanut Mountains, the expansive views highlight the incredible geologic processes that have shaped the region's waterways, where islands dot the Salish Sea as far as the eye can see.

Heading south from the Chuckanuts towards Fidalgo Island, hikers are challenged with highways and private property and are more visible from above in their brighter clothes to ensure safety. Formed by volcanic lava flows and mostly covered by glacial deposits, Fidalgo Island

portrays the grand geologic processes that makes us reevaluate our understanding of time. With popular hiking trails, excellent wildlife viewing, infamous Deception Pass State Park, roadside produce stands, and plenty of motorized roads, our view from above looks starkly different than the rest of our journey leading up to the Puget Sound region. Visitors from around the world come here for the natural wonders, posing for pictures on the Deception Pass Bridge, picnicking on the rocky beaches, and swimmers splashing in the small lakes that dot the island.

Heading over the bridge to Whidbey Island, we can hear the hum of an aircraft, eventually coming into sight as it lowers into the Naval Air Station. On the western coast of the island, a beautifully peeling madrona invites us for a perch with prime opportunities to catch sightings of river otters, leopard seals, and a variety of whales including orcas. We eventually make it to Fort Casey where a ferry boat loads cars and passengers, and a variety of seabirds dance in the salty breezes, keeping an eye out for delicacies left behind by people.

Departing from Whidbey Island, the ferry reaches its destination at a populous Port Townsend where streets are scattered with shoppers and outdoor recreators alike. Hiking the northeastern corner of the Peninsula seems precarious as hikers spend a decent amount of time on Highway 20 with very little shoulder room. Meandering past Discovery Bay, we can begin to sense the moisture that supports the lush, temperate rainforests of the Olympics. Ancient forests drip with moss where endemic plant and animal species were once isolated from the rest of the continent. From above, it is harder to get a look into the forests with endless seas of Douglas Fir, Western Red Cedar, Bigleaf Maple, Red Alder, and more.

Reaching the western end of the Olympic Mountains, we are greeted with the infamous Pacific rain where an average of 12 feet dumps over the land each year. The immense precipitation creates a jungle-like feel where massive Sitka Spruce trees tower over the landscape and Roosevelt Elk happily enjoy the wet environment.

# PACIFIC NORTHWEST NATIONAL SCENIC TRAIL



## SIGNIFICANCE STATEMENTS FOR THE OVERALL TRAIL

The Pacific Northwest National Scenic Trail (PNNST) offers one of the most extensive and varied long-distance wilderness experiences by passing through three National Parks, seven National Forests, and seven different mountain ranges. Ranked one of the most rugged scenic trails in the world, it provides challenges and rewards of encountering the wild Pacific Northwest.

Sections of the PNNST contain primitive areas relatively undisturbed by human activities where scientific research may reveal information about natural processes and living systems that may have wide-ranging applications as global indicators of ecological change.

As a foundation for healthy and diverse ecosystems, officially designated wilderness and other remaining wild lands (such as Glacier National Park) provide critical habitat for rare and endangered species and play a significant role in the overall health of natural systems worldwide.

The PNNST provides a unique opportunity of both wilderness and community experience as the trail continuously rises high into alpine meadows and dips back down into historic trail communities. The varying topography and geography of the trail represents the reality of this nation's landscape and community settlements.

# MONTANA REGION



## SIGNIFICANCE STATEMENTS

The PNNST travels through approximately 1.6 billion years of earth history where erosion, sediment deposition, uplift and thrust faulting, and glaciation created the Rocky Mountains and surrounding area. The trail encounters unique evidence of ancient rock of the Belt Sea and some of the oldest and best preserved sedimentary rocks of North America.

The easterly end of the PNNST passes through Glacier National Park, which contains one of the finest assemblages of ice-age alpine glacial features in the contiguous 48 states, and it has relatively accessible, small-scale active glaciers.

The PNNST passes through the Yaak Valley, a microcosm of rainforest located in

the Kootenai National Forest that is unique for this section of the trail. Its low elevation and high precipitation make it an important corridor that links protected areas for wildlife species. Archaeological evidence suggests over 9,000 years of human use in the Yaak, dating back from the early Holocene.

In Montana, the PNNST crosses ecosystems that provide critical habitat and serve as refuges for threatened and endangered keystone species such as the grizzly bear and the recently re-introduced gray wolf. The rare but potential opportunity for hikers to encounter these and other sensitive wildlife species has important implications for monitoring and managing human-wildlife interactions.

The PNNST runs through important hunting grounds of the Blackfoot Nation where the people have long had a special connection to the land and recognized the symbiotic relations that supported their lifestyle. The prairies of the Rocky Mountains were once covered in protein-rich fescue grass that supported the richest buffalo ecosystem in North America and allowed for the development of an advanced and efficient hunting technique to run the buffalo off cliffs to their death.

The PNNST runs along the Canadian border in Northern Montana where Glacier National Park connects with Waterton Lakes National Park in Alberta, Canada. Designated as the very first international peace park in 1932, it was an important and signifying decision in a move towards peace between both people and the land.

# IDAHO & EASTERN WASHINGTON



## SIGNIFICANCE STATEMENTS

Parts of the PNNST in eastern Washington and Northern Idaho were largely shaped by the Great Fire of 1910, in which a series of fires burned over 2 million acres of forests and towns. The trail passes through re-grown forests that signify a philosophy of fire suppression that lasted for decades. Forest management practices have only recently changed due to a new understanding of fire ecology. The infamous fires of 1910 not only impacted the landscape, but dramatically impacted the practices and management techniques of the US Forest Service.

**[wildlife]** The PNNST passes through important habitat of the endangered woodland caribou. Woodland caribou historically populated many forests throughout North America, but have been driven to endangerment and remain in eastern Washington and Northern Idaho. The small population, of approximately 27 caribou, can be found primarily in the

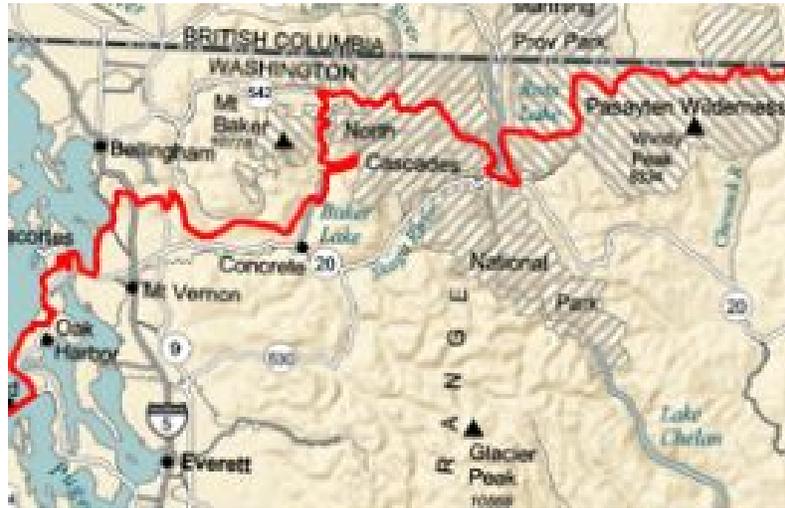
Selkirk Mountains and is the only herd left of its type in the the world.

The route of the PNNST through Eastern Washington and Idaho connects with the ancestral lands of tribes of the Methow, Okanogan, San Poil, Lake, Coville, Kalispel, Spokane, and Coer d Alene peoples. While many present-day descendants now live on the Colville Reservation, there are sites along the trail that are important to and part of tribal cultures and lifeways. These areas and managed in consultation with the tribes and many are protected under the provisions of the Antiquities Act and Archeological Resource Protection Act.

**[ecology]** The PNNST traverses through plateaus of Eastern Washington and northern Idaho that foster the growth of Common Camas, or *Camassia quamash*. The plant holds important historical and cultural significance for the plateau tribes of the region as the bulbs provided necessary nutrients to the people during summer time.

**[Geology]** The PNNST travels rugged topography in northern Idaho and Eastern Washington, shaped primarily during the Pleistocene Ice Age where continental ice sheets and alpine glaciers advanced and retreated from Canada repeatedly 100,000 years ago. At maximum glaciation, ice was thick enough to pass over the highest points of the Selkirk Mountains.

# WESTERN WASHINGTON



## SIGNIFICANCE STATEMENTS

**[geology]** The PNNST travels through the North Cascades National Park Complex which contains more glaciers than any other protected area outside Alaska, representing one-quarter of all glaciers in the lower 48 states. The North Cascades are one of the few places where glaciers are still actively shaping landscapes and waterways.

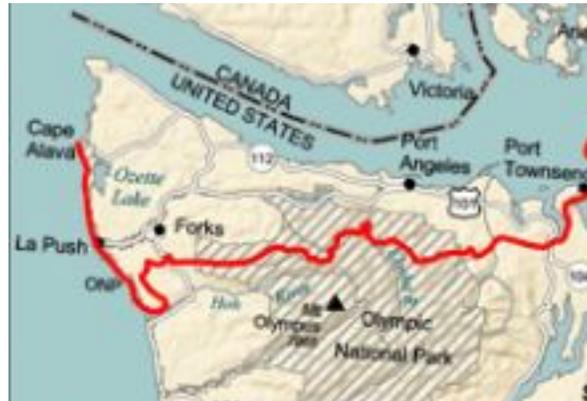
**[pre-settlement]** Preserved within the North Cascades is abundant evidence of over 9,000 years of cultural and technological development. This long history reveals a range of human adaptations to changing climates and environments at all elevations of the North Cascades. *[[what kind of archaeological evidence??]]*

**[post-settlement]** The PNNST passes through a long history of trapping and fur trade in the North Cascades, the earliest commercial use of its resources following European settlement in the west. Wildlife

adapted to harsh mountain conditions including beaver, bear, cougar, wolf, lynx, fisher, muskrat, and marten supported families for decades. The practice eventually slowed as over-trapping led to fur farming businesses and eventually was outlawed when the North Cascades was designated a National Park in 1968.

**[ecology]** The PNNST crosses over Ross Dam, an important representation of the region's hydrologic resource dependency. High levels of precipitation, intensely varied landscapes, and active glaciers throughout the western Washington region helped shape the way people have used water resources throughout history.

# OLYMPIC PENINSULA



## SIGNIFICANCE STATEMENTS

The PNNST travels across very “young” land where the oldest rocks of the peninsula date back to just about 50 million years ago. The unique peninsula was formed due to its location relative to the Ring of Fire.

In this region, the PNNST passes through subalpine and wildflower meadows, temperate forests, and rugged shoreline, where the Olympic Mountains are considered an international biosphere and a World Heritage Site by the United Nations. At least 16 animal species and 8 plant species on the peninsula exist nowhere else in the world.

The PNNST explores excellent examples of protected habitat throughout Olympic National Park where stands of old growth forests are scattered throughout the north and east lowlands. Where protected trees dating to over 1,000 years old can be found within the park, no old growth timber can be found beyond park boundaries.

The PNNST crosses through unique habitat where thirty-five endemic plant and animal

species can be found on the Olympic Peninsula and nowhere else in the world. The Olympic Mountains were cut off from the rest of the continent during the Pleistocene Ice Age, creating an island effect, isolating the region and fostering high levels of endemism. A few endemic species include the Olympic marmot, the Olympic torrent salamander, the Olympic mudminnow, Quileute gazelle beetle, and the Arionid jumping slug.

The PNNST traverses through Indigenous land where land management techniques have long been utilized by different tribes of the Olympic region, including the Lower Elwha Klallam, Jamestown S’Klallam, Port Gamble, Skokomish, Quinault, Hoh, Quileute, and Makah. Centuries before the Forest Service and other land management agencies, prairies were burned to increase fertilization of the soil and the abundance and diversity of plants, destroy invasive species, increase medicinal opportunity, increase forage for deer and elk, keep surrounding trees from encroaching on prairies, and create habitat for key plant and animal species.

## **INTERPRETIVE THEMES**

*Interpretive themes are key ideas through which these nationally significant resource values are conveyed to the public. They connect the Pacific Northwest National Scenic Trail's resources to the larger universal meanings and values of which they are a part. They are the building blocks- the core content- on which the interpretive and educational materials, services, and programs are based. Each primary or secondary theme may connect to a number of specific stories or subthemes. These elements are helpful in designing individual services, ensuring that the main aspects of interpretive themes are addressed.*

### **The Hiking Experience**

The PNNST beckons with its tremendous opportunities for adventure, challenge and self-reliance; however, at trail's end it is the powerful personal connections with the landscape and communities along the way that is often the most valuable gift of the journey.

### **The Physical Environment-Land, Water Climate**

Exploring the PNNST schools us in the complex physical essence of the Pacific Northwest Region with its distinct combination of dynamic geology, temperate climate, and abundance of water, ultimately reminding us of the powerful natural forces that shape our world.

### **A Walk through History/Time Travel**

Along the PNNST, as we immerse ourselves in the footsteps, signs, and stories of those who came before, we come to appreciate their deep ties to the land and recognize this historical "DNA" and strong sense of place in trail communities today.

### **The PNNTA as Lesson, Inspiration and Tool for Conservation**

The PNNST reminds us that people are an integral part of nature, motivating us to draw from its lessons, inspiring our stewardship, and spurring our commitment to conserve it and places like it into the future.

# INTERPRETIVE AUDIENCES & OBJECTIVES

*Interpretive audiences are distinct groups of individuals for whom interpretive services are specifically designed. By definition, services designed specifically for one audience will be less effective for other audiences. The following is a list of audiences, identified by staff and stakeholders, that this plan is designed to take into account.*

***Trail Visitors (TV):*** Trail visitors are those that seek to hike, both short and long distances, in Wilderness and wildlands as well as “potential” visitors that may not have spent time in nature. This audience has some sort of connection to nature and the outdoors and includes but is not limited to day hikers, thru-hikers, pack and saddle stock users, and bikers. Wilderness visitors can visit individually or in small groups and may be using the trail for an experience with wilderness or for excellent recreational opportunities. These visitors can be of all ages, backgrounds, and experience.

Wilderness visitors are likely to be drawn to inspiring stories and information related to the natural place they are at and of their activities of interest. Today, many visitors use online resources to plan for their visit to the trail but are still interested in carrying detailed maps of the place they are at.

Because different sections of the trail allow for different uses, interpretation needs careful consideration before implementation. For example, bikers and stock users cannot thru-bike or thru-pack due to various usage jurisdiction.

## **Interpretive Objectives for Trail Visitors:**

### **Know**

- The PNNST traverses through three National Parks and seven National Forests; land that has been set aside by Congress to be managed and protected differently.
- Native Americans have traveled the grounds of the PNNST for thousands of years before colonial settlers arrived.
- Hikers should know that accessibility, rules, and regulations may vary along the route based on the land manager.
- Outdoor and primitive skills and understanding of the risks of recreating on the PNNST.
- Hikers should be familiar with the seven Leave No Trace guidelines for backcountry travel.
- Humans have walked the grounds of the PNNST for thousands of years, having been intimately connected to the mountains, water, and wildlife of the Pacific Northwest.

### **Feel**

- Hikers should feel an appreciation for the intimate connection humans have had with the land for thousands of years.
- Hikers should feel responsible for their own personal safety.
- Hikers should feel a connection and sense of belonging to the land.

### **Believe**

- Hiking should believe the PNNST goes beyond recreational values.
- Every individual has the power and opportunity to be an environmental steward.
- Wild places and communities of people are both dynamic and experience change through natural processes.

- Logging, damming, and other land management practices provide both livelihood and opportunities for many groups of people.

Do

- Experience solitude and self-reliance.
- Connect with historic communities along the trail.
- Hikers are expected to exhibit the seven Leave No Trace practices in backcountry travel.
- Hikers should feel compelled to advocate for protection and conservation of wild places while on and off the trail.
- Share knowledge and experience with others while on and off the trail.

***Trail Communities (TC):*** Trail communities are those that live near the PNNST and may have an interest in hiking the trail or provide assistance and commodities for hikers coming on or off the trail. Eighteen trail communities exist directly in the path of the trail or are just a few miles away, and can range from small historic towns to larger urban areas.

Trail communities are likely to be involved in both the giving and receiving of interpretation. Thru hikers and day visitors will often depart from, stop by, or end at a trail community, and these communities have their own story and history that contributes to the uniqueness of the PNNST.

The following trail communities are found on or near the trail and are listed in hiking order from east to west:

1. East Glacier, MT
2. Polebridge, MT
3. Eureka, MT
4. Yaak, MT
5. Bonners Ferry, ID
6. Priest Lake, ID
7. Metaline Falls, WA
8. Northport, WA
9. Republic, WA
10. Oroville, WA
11. Concrete, WA
12. Sedro-Woolley, WA (home to the Pacific Northwest Trail Association headquarters)
13. Anacortes, WA
14. Oak Harbor, WA
15. Coupeville, WA
16. Port Townsend, WA
17. Forks, WA
18. Ozette, WA

### **Interpretive Objectives for Trail Communities:**

Know

- Trail communities know that visitors from around the country and world have come to hike the PNNST to share the Pacific Northwest's natural wonders.

- Trail communities know that the PNNST is intentionally routed through trail communities, providing a unique interactive experience which celebrates humans as a part of nature.
- Trail communities along the PNNST provide goods for both through-hikers and day-hikers to remain stocked on essentials.

#### Feel

- Trail communities feel an appreciation for the trail and the visitors it brings.
- Trail communities feel like they are a part of the trail experience.
- Trail communities feel pride in their history and heritage.

#### Believe

- Trail communities believe they have a part in trail stewardship.
- Trail communities believe their town is a special part of the trail.

#### Do

- Trail communities share with visitors their knowledge and connection to their town.
- Trail communities advocate for environmental conservation and/or protection.

***Internal Employees and Staff Groups (IN):*** Because the Pacific Northwest National Scenic Trail passes through 3 National Parks and 7 National Forests, a variety of internal employees and staff groups will be using the trail. National Parks are managed by the Department of Interior and designed to “preserve unimpaired the natural and cultural resources and values of the National Park System for enjoyment, education, and inspiration of this and future generations.” National Forests, on the other hand, are managed by the Department of Agriculture and aims to “sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations (<https://www.nationalforests.org/blog/what-are-the-differences-between-national-parks-and-national-forests>).”

As employees of these protected lands, this audience is important to consider in interpretation. The different levels of management at various parts along the trail requires different approaches and implementation of interpretive topics. Reaching this audience will be best at office and field-based training and orientation seminars. Interpretation utilized here can be reinforced in other places such as staff meetings and printed handouts.

### **Interpretive Objectives for Internal Employees and Staff Groups:**

#### Know

- Internal employees know that visitors from around the country and world have come to hike the PNNST to share the Pacific Northwest’s natural wonders.
- Internal employees know that accessibility, rules, and regulations may vary along the route based on the land manager.
- Internal employees know outdoor and primitive skills and understand the of the risks of recreating on the PNNST.
- Internal employees should be familiar with the seven Leave No Trace guidelines for backcountry travel.

#### Feel

- Internal employees feel proud of their work they do for the PNNST.
- Internal employees feel confident in speaking with and providing information for visitors.

Believe

- Internal employees believe everyone deserves the opportunity for outdoor recreating.
- Internal employees believe they have a part in trail stewardship.

Do

- Internal employees utilize the seven Leave No Trace guidelines.

***Educational Groups (EG):*** Although some parts of the trail are so remote it hardly encounters any hikers, other sections are highly used and popular sites for educational groups ranging from elementary to university students. Deception Pass in western Washington State, for example, can see as many as 2,000,000 visitors each year (<http://www.deceptionpassfoundation.org/mission-statement/>) and has easy access for all types of visitors. This audience requires a different approach in interpretation in that it should not only be fun and engaging, but also meets state education standards.

### **Objectives for Educational Groups:**

Know

- Knowledge and understanding of Leave No Trace practices while on and off the trail are imperative to conserving and protecting the lands and wildlife of the Pacific Northwest.
- The PNNST passes through critical habitat for some endangered species.
- The risks of recreating in wild places.

Feel

- Responsibility for their own safety.
- Appreciation for the biotic and abiotic elements of the PNNST.

Believe

- Each individual, including themselves, have a role in environmental stewardship.
- Interpretation has the power to build stronger connections between people and the land.

Do

- Consistently exhibit Leave No Trace practices.
- Seek opportunities to become an environmental steward.

***Conservation and Advocacy Organizations (CO):*** Maintaining 1,200 miles of rugged terrain with short windows of access to the trail, conservation and advocacy organizations have played an important role in maintaining the integrity of the Pacific Northwest National Scenic Trail. From broad-based groups such as the Sierra Club and the Wilderness Society, to specific issue groups such as the Back Country Horsemen and the Student Conservation Association, this audience also requires a different interpretive approach because of their purposes for being involved with the trail. These groups would be best reached through personal presentations and exhibits at organization meetings, but would also benefit from printed materials such as newsletters, project updates, and accomplishment reports.

### **Interpretive Objectives for Conservation and Advocacy Organizations:**

Know

- The PNNST traverses through three National Parks and seven National Forests; land that has been set aside by Congress to be managed and protected differently.
- Accessibility, rules, and regulations of the different land types along the trail.

- Leave No Trace practices.

#### Feel

- Conserving our wild places is imperative to the overall protection of life and culture for all Pacific Northwest inhabitants.
- Responsibility to share knowledge with others.

#### Believe

- Conservation and preservation of different types of wilderness requires careful consideration and management.
- Each individual, including themselves, have a role in environmental stewardship.
- Logging, damming, and other land management practices provide both livelihood and opportunities for many different groups of people.

#### Do

- Exhibit Leave No Trace practices.
- Seek opportunities to further environmental stewardship.
- Share knowledge and experiences with others.
- Recruit others to join conservation and/or advocacy organizations.

## Resources:

National Park Service. *Glacier National Park: Comprehensive Interpretive Plan*. Department of Interpretive Planning, 2006.

*Foundation Document: North Cascades National Park Complex*. National Park Service, 2012.

Wray, J., & Anderson, M. K. (2003). Restoring Indian-set fires to prairie ecosystems on the Olympic Peninsula. *Ecological Restoration*, 21(4), 296-301.

### Buffalo run in Montana:

<http://www.archaeology.org/issues/155-1411/letter-from/2587-letter-from-montana-buffalo-jumps>

### Deception Pass State Park:

<http://www.deceptionpassfoundation.org/mission-statement/>

### Idaho glaciation:

[http://geology.isu.edu/Digital\\_Geology\\_Idaho/Module12/mod12.htm](http://geology.isu.edu/Digital_Geology_Idaho/Module12/mod12.htm)

### Olympic Mountains natural history:

<https://www.nps.gov/olymp/learn/nature/temperate-rain-forests.htm>

### Pacific Northwest Trail Association:

[www.pnt.org](http://www.pnt.org)

### Pend Oreille Native gathering site:

[http://www.sandpoint.com/Community/history\\_indians.asp](http://www.sandpoint.com/Community/history_indians.asp)

## **Confederated Tribes of Colville**

[http://colville.whydevelop.com/history\\_of\\_the\\_colvilles.php](http://colville.whydevelop.com/history_of_the_colvilles.php)

### **Fidalgo Island:**

Terry Slotemaker, author of “The Geology of Fidalgo Island” published by the Anacortes Museum

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## **Appendix A: Respecting Native Americans in Interpretation**

When talking about a designated National Scenic Trail in the United States, it is imperative to include the entire story of how that land was designated by Congress as to not erase the histories and stories of Native Americans. With the settlement of European and Spanish colonizers in the Pacific Northwest came devastation and loss for all of the tribes that resided and thrived off the land and waters for thousands of years prior. While we cannot go back and change the past, we can honor the legacy of Indigenous Peoples and fight for their voice and participation in current issues and decision-making processes.

Keeping this conflict in mind, it is necessary to consult with any Indigenous Tribe when interpreting *their* story, culture, and history. The PNNST travels through the traditional grounds

of many different tribes including, but not limited to the Makah, Quinault, Quileute, Twana, Klallam, Skagit, Swinomish, Nooksack, Stillaguamish, Wenatchi, Colville, Okanagan, Kalispel, Kootenai, Flathead, Blackfoot/Blackfeet, and Crow. As original inhabitants with intimate knowledge and understanding of these lands, Native Americans are absolutely an important part of the PNNST's story, but as a government organization, it is not *our* story to tell without consult.

This appendix serves as a reminder to interpreters and planners of interpretation to seek out and connect with specific Tribal leaders and Tribal Historic Preservation Officers of those regions along the trail. Learning, understanding, and respecting the protocol of different tribes is a positive step in the direction of building trust and collaborative interpretive work.

## Appendix II: Storyline Ideas

The following section includes the information and stories shared by our stakeholders that did not make it into the actual Interpretation Plan. The Forest Service approved of adding a “Storyline” document so stakeholders and contributors know their voices were heard. Divided by the main ecoregions of the PNNST, these storyline ideas are also potential topics for future interpretive programming.

### **Montana:**

- The PNNST passes through a small homestead town called Polebridge, located in northwestern Montana and is representative of the tough and rugged lifestyle that settlers were forced into following the mining booms in the late 1800s. This region attracted homesteaders for the vast timber supply, wildlife, and hopes of coal and oil.
- Climate change is taking a dramatic toll on Glacier National Park. Land management is working to adapt as shoulder seasons are being extended to meet the changing needs of the landscape.
- Parts of the PNT in Montana face issues of habituating wildlife to humans and the effectiveness of safety training. Respecting the environment and the challenges of wildlife are important.
- “Crown of the Continent.” Glacier National Park/Bob Marshall Wilderness is richly biodiverse with intriguing human history of mining and logging. This site is an excellent example of how nature fights back.
- A military baseline called “Dew Line” in the Yaak Valley holds significance to the region.

### **E. WA/Idaho:**

- The PNNST passes through Metalline Falls, a small trail community with important historical roots of mining across the region that is representative of the role that mining played across the region. In the mid 1900s, the Metalline Mining District was Washington State’s largest lead and zinc supplier and “soldier-miners” were deployed here during World War II to extract minerals in the efforts for the war. (*Metalline Falls top 100 small Art towns in America.*)
- The building of railroads and the rise of cross-country transportation changed the way of living in Eastern Washington.
- The PNT’s location in Eastern Washington (& Idaho) is unique because it borders Canada. There is a long and important history related to border patrol management, smuggling, blurred boundaries, etc.
- Northport, WA is a town in northeastern Washington that has been dealing with the effects of a smelter site that have been poisoning the Columbia River and its inhabitants of the area for many decades. The smelter site, located in BC, processed lead, zinc, cadmium, sulfuric acid, and other compounds in which the waste disposed polluted and poisoned the river and people surrounding it. → autoimmune diseases..
- The Pend Oreille is a tributary of the Columbia River and is culturally and historically significant as a gathering site for Native Americans.

### **W. WA:**

- Mining played a very important role in the North Cascades following white colonial settlement

- almost 6,000 unpatented claims and almost 2,000 acres of patented claims.
- Joe Morovitz: Real-life Bunyan. The “Pioneer of mountaineering” in the Mount Baker region. Joe came to the Pacific Northwest and left behind incredible feats of mountaineering and exploration during the late 1800s. He left mysteriously and disappeared without a trace. Places are named after him: Morovitz Creek, Morovitz Ranch, Morovitz Stamp Mill, gold mines...
- Mount Baker is the only volcano on the PNNST
- Hydropower in the North Cascades: Seattle City Light
- First section of the PNNST was built in Skagit County
- CCC: Deception Pass, Mt. Baker, trail building

### **Olympics:**

- Fidalgo Bay was once a popular site for Samish and Swinomish people to fish and harvest oysters, clams, and crab from tidelands. Shorelines were populated with cedar longhouses and villages until the 1890s when Spanish and British settlers began to build lumber mills and other permanent structures.
- The Olympic Peninsula region of the PNNST, although land based, is a place where the sea and its resources are intimately connected with land resources. The livelihood of the people who have been there and continue to be there is due to the immense opportunity where land meets the sea. (Fishing, shellfish harvest, trade, maritime protection...) *Hiker experiences that connection to the land and sea.*
- Port Townsend has a long and significant history as a maritime port and trading place because of its geographic location where Strait of Juan de Fuca enters Puget Sound.
  - Beginning with Native American canoe travel, followed by white settlement in the early 1800s, Port Townsend became a site for customs for sea travelers heading from the Pacific into the Puget Sound region.
  - Port Townsend’s geographic location made an optimal safe harbor for white settlers to protect the land and developed Fort Flagler, Fort Casey, and Fort Worden equipped with cannons.
  - Port Townsend became the significant place it is from culture intersecting with ecology.
- Rainshadow effect is unique due to geologic landscape.
- The story of the Elwa Dam including its removal is an interesting and unique story that has helped shape the biodiversity and landscape of the area. PNT crosses over Elwa River
- Whales and other marine mammals have played an important role in the development of both Native & European peoples on the coast: trade, food
- Naval Forts: Casey, Flagler, & Worden
- Norwegian Memorial at Rialto Beach