AN ABSTRACT OF THE THESIS OF

Patricia C. Halleran for the degree of Master of Arts in Applied Anthropology presented on November 26, 2018.

Title: "We All Live Downriver": Environmental Justice and Community Resistance to the Pacific Connector Gas Pipeline and Jordan Cove Export Terminal in Southern Oregon

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Abstract

Native America tribes and community members throughout Oregon have asserted a strong opposition to the fossil fuel industry's attempt to expand railways, build pipelines, and construct refineries, holding facilities, and export terminals. Despite the limited presence of fossil fuel infrastructure in the state, however, the industry is actively pursuing permits for two highly controversial developments: The Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal. The pipeline would connect with the existing Ruby Pipeline in Malin, Oregon, pass through 229-miles of southwestern Oregon's tribal, forest, and agricultural lands while traversing over 400 streams and rivers, and terminate on the coast of Oregon in Coos Bay where the gas will be liquefied and refined prior to exportation to overseas markets. Over 600 private landowners are threatened with eminent domain and the ancestral territories, cultural resources, and burial grounds of five Oregon and three northern California federally recognized tribes would also be impacted by this project.

The purpose of this master's thesis research was three-fold: 1) explore the negative impacts of the LNG supply chain; 2) conduct an ethnographic study of communities and organizations within the affected zones of the LNG project in order to understand how they perceive the risks they face, and 3) highlight how these same communities are forging

intersectional alliances to assert their opposition to the development. This study identifies the environmental, cultural, and social threats of this project using the conceptual frameworks of environmental justice, settler colonialism, and the anthropology of energy and extraction. Additionally, it investigates the connection between human rights, environmental protection, and the conservation of cultural keystone species which are often threatened by large-scale fossil fuel development.

“We All Live Downriver”: Environmental Justice and Community Resistance to the Pacific Connector Gas Pipeline and Jordan Cove Export Terminal in Southern Oregon

by
Patricia C. Halleran

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APPROVED:

Major Professor, representing Applied Anthropology

Director of the School of Language, Culture, and Society

Dean of the Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Patricia C. Halleran, Author

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Native America tribes and community members throughout Oregon have asserted a strong opposition to the fossil fuel industry's attempt to expand railways, build pipelines, and construct refineries, holding facilities, and export terminals. Despite the limited presence of fossil fuel infrastructure in the state, however, the industry is actively pursuing permits for two highly controversial developments: The Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal. The pipeline would pass through 229-miles of southwestern Oregon's tribal, forest, and agricultural lands and would traverse over 400 streams and rivers and six miles of wetlands. The pipeline would connect with the existing Ruby Pipeline in Malin, Oregon and terminate on the Oregon Coast in Coos Bay where the gas will be liquefied and refined prior to exportation to overseas markets. Over 600 private landowners would be threatened with eminent domain and the ancestral territories, cultural resources, and burial grounds of five Oregon and three northern California federally recognized tribes would be impacted.

Opponents of the LNG project argue that the natural gas that would pass through Oregon via the pipeline will not benefit Oregonians as both the pipeline and terminal are only expected to produce less than 250 permanent jobs (Western Environmental Law Center 2017). The fuel will be refined at Jordan Cove and shipped to international markets in Asia, creating huge profits for the industry while forcing Oregonians to bear the burden of any and all potential risks this project poses. Additionally, many opponents believe that what the State of Oregon does not need is a multibillion-dollar project that would become the state's largest greenhouse gas emitter, the equivalent of adding 7.9 million passenger cars to Oregon's roads annually (Oil Change International 2017), and members of the alliance to stop this development consider prolonging

the dependence on fossil fuels at a time when humans should be investing in sustainable and renewable energy sources to be an act of climate injustice for future generations. Using the conceptual frameworks of environmental justice, settler colonialism, and the anthropology of energy and extraction, this thesis examines the environmental, cultural, and social impacts of the proposed pipeline and terminal while also highlighting the resistance movement that has been growing for over a decade to stop it.

Chapter Two of this thesis provides an overview of the development project and the risks and uncertainties community members in the region are concerned about. I argue that both hydraulic fracturing and the infrastructure it relies on to transport hazardous fossil fuels throughout the United States not only exacerbates environmental degradation and climate change, it also poses unique and potentially catastrophic consequences to rural communities. Those who live and work on the path of the proposed Pacific Connector Pipeline have much to lose, particularly Indigenous communities that have been dispossessed of their traditional lands and who are still recovering from near cultural genocide.

Chapter Three examines the proposed pipeline and export terminal through the conceptual frameworks of environmental justice and settler colonialism. It includes qualitative ethnographic data collected by the researcher during 2017 and 2018, and the narrative of over thirty research participants who are a part of a growing alliance in northern California and southern Oregon.

Chapter Four of this thesis is an independent chapter funded by Oregon State University's National Science Foundation Research Traineeship Program in which the researcher was a fellow of during the 2017/2018 school year. It is part of a larger report in which a research team investigated the importance of cultural keystone species conservation as a measure of

protecting both biodiversity and cultural diversity. Although this chapter does not directly tie together with Chapter Two and Three, it does connect to the larger issue of the human and cultural rights of Indigenous and traditional peoples who rely on culturally important species for their health and wellbeing.

Chapter Two: Literature Review

Section 2.1 Introduction

Native American tribes and other community members across Oregon have asserted a strong opposition to the fossil fuel industry's attempt to expand railways, build pipelines, and construct oil and gas refineries, holding facilities, and export terminals. To date, Oregon has no crude oil production or fuel-producing refineries; gasoline and diesel are imported from Washington and northern California via rail, pipelines, crude-oil tanker trucks, and by ocean vessels (U.S. Energy Information Administration, 2014). There are presently three interstate natural gas pipelines in Oregon including the Northwest Pipeline Group, Ruby Pipeline LLC, and the TransCanada-Gas Transmission NW (U.S. Energy Information Administration, 2014). However, the limited presence of fossil fuel infrastructure in Oregon might soon change as the industry is actively pursuing permits for two highly contested and controversial projects: The Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal.

The proposed Pacific Connector Gas Pipeline would pass through 229-miles of southwestern Oregon's tribal, forest, and agricultural lands, and would traverse five of the region's largest rivers including the Rogue River - Oregon's second most important salmon-rich river following the Columbia River (Western Environmental Law Center 2017). The pipeline would connect with the existing Ruby Pipeline in Malin, Oregon and terminate on the coast of Oregon in Coos Bay where the natural gas will be liquefied prior to exportation. Over 600 private landowners would be threatened with eminent domain, and the pipeline would cut across the ancestral territories of the Klamath Tribes; Cow Creek Band of Umpqua Tribe of Indians; Coquille Indian Tribe; Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians, and the Confederated Tribes of Siletz Indians. As the pipeline would cross under the Klamath River,

several northern California tribes who live downstream would also be impacted including the Karuk Tribe, the Hoopa Valley Tribe, and the Yurok Tribe. Opponents of the project argue that if approved, the pipeline and terminal would not only jeopardize small rural communities and their economies in southern Oregon and northern California, the development would also ignore tribal sovereignty, threaten tribal resources, and disrupt and/or destroy tribal burial grounds and other sacred sites.

The Pacific Connector and Jordan Cove were initially proposed as an import terminal in 2005 to supply natural gas from Russia to meet California's growing energy needs. As technologies improved and hydraulic fracturing, or fracking, became a more cost-effective way to extract natural gas in America and elsewhere, Verersen, the Canadian company behind the development, resubmitted an application in 2012 to the Federal Energy Regulatory Commission (FERC), one of the main regulatory agencies that oversees LNG projects, for the development to be reconsidered as an export terminal. Veresen completed an Environmental Impact Statement (EIS) in 2015, yet the revised proposal was rejected by FERC in March 2016 and resubmitted, reviewed, and rejected again in November 2016 on the grounds that the company could not prove that there was a significant enough demand for LNG to justify the potential risks and uncertainties the development could have on local communities (United States of America Federal Energy Regulatory Commission 2016). However, Gary Cohn, a spokesperson for the White House National Economic Council, stated in May of 2017 that the Trump Administration intends to pressure FERC to issue the permits for the pipeline and terminal, arguing that the development is essential for energy independence and will be beneficial to the U.S. economy (Mooney 2017). On June 26, 2017, the Jordan Cove Energy Project, L.P. and the Pacific Connector Gas Pipeline, L.P. filed a Notice of Intent to prepare a new EIS for the planned

development and stated the previous concerns that FERC had have been addressed (USA FERC Federal Register 2017). The updated EIS is expected to be published in early 2019, with plans to complete construction by 2023.

Opponents of the LNG project argue that the natural gas that would pass through Oregon via the pipeline will not benefit Oregonians as both the pipeline and terminal are only expected to produce less than 250 permanent jobs (Western Environmental Law Center 2017). The fuel will be refined at Jordan Cove and shipped to international markets in Asia, creating huge profits for the industry while forcing Oregonians to bear the burden of any and all potential risks this project poses. Additionally, many opponents believe that what the State of Oregon does not need is a multibillion-dollar project that would become the state's largest greenhouse gas emitter, while also prolonging the dependence on fossil fuels at a time when humans should be investing in sustainable and renewable energy sources.

Section 2.2: Background on Pembina Pipeline Corporation

The Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal were originally proposed by Energy Projects Development Limited in 2005, and soon after changed hands to Veresen, a Calgary-based energy company. In 2017, Veresen was bought out by Pembina Pipeline, also a Calgary-based energy company, which has a total enterprise value of $33 billion (Pembina 2018). Pembina transports tar sands oil (bitumen) and LNG in both Canada and the United States through a web of pipelines, and also by tanker trucks and rail. Pembina owns and operates an expansive control over Western Canada's fossil fuel extraction sites and infrastructure, and accidents and spills are not uncommon. Moreover, many of the pipelines that are part of the growing network of pipelines in which Pembina owns and operates are aging, therefore are increasingly prone to accidents as time passes (Canadian Press 2016). Participants

in the ethnographic portion of this study expressed deep distress regarding the frequency of pipeline accidents in North America. They were also highly concerned that the Pacific Connector Pipeline is owned and operated by a Canadian company that has no ties to the region, and they feared that Pembina would put profit above the health and wellbeing of local residents.

Section 2.3: Overview of the Pipeline and Export Terminal

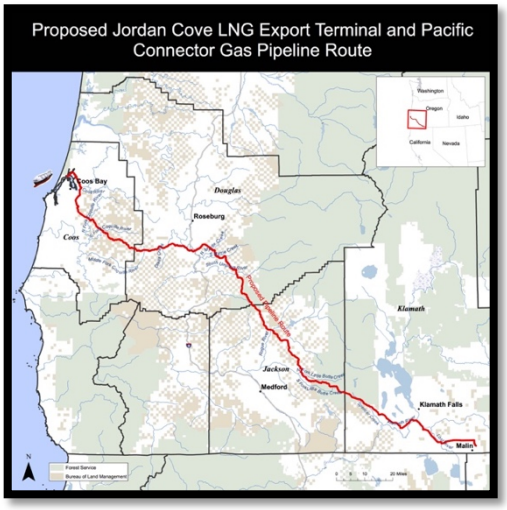

Figure 1 - Pacific Connector Gas Pipeline/Jordan Cove Export Terminal Proposed Route. Source: Rogue Climate

In December 2007, the Pacific Connector Gas Pipeline and the Jordan Cove Energy Project first applied for approval from FERC to construct an LNG import terminal and a 229-mile-long pipeline in Oregon to help supply California's growing energy needs. The first EIS was completed by May 2009, and by December of that same year FERC approved the project. Around the same time, American energy companies began to make technological advancements in hydraulic fracturing and horizontal drilling, communally known as fracking, which made it possible to unlock massive untapped oil and gas resources located in deep layers of shale rock and tight sands. This led to a massive boom in crude oil and natural gas extraction and is often referred to as the 'modern-day gold rush'. Due to the depletion of conventional extraction sites, fracking has become the method of choice by the industry and has proven to be a highly

profitable method, albeit not without serious risks and consequences for human communities and the environment. Today, there are close to one million active oil and gas fracking wells in America, and that number is growing every year (FracTracker Alliance, 2017).

Section 2.4: Hydraulic Fracturing

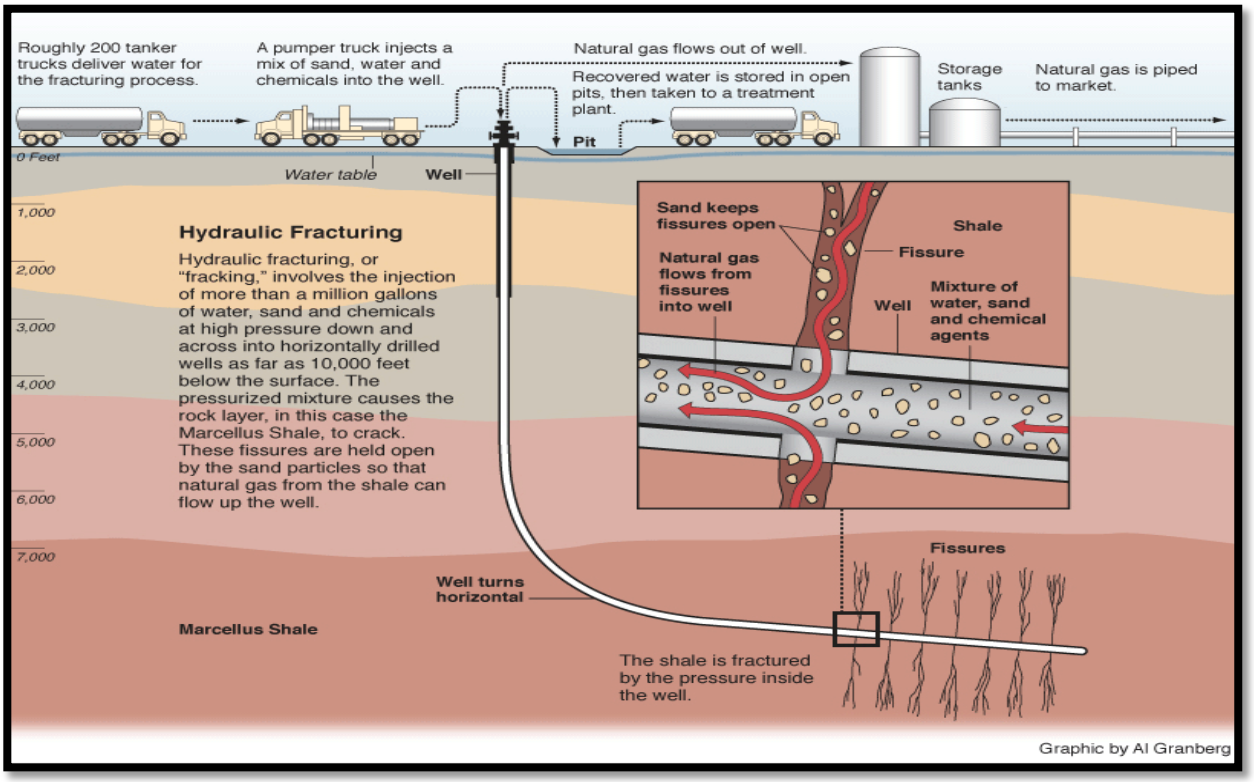

Figure 2 - Al Granberg.2016. https://www.sciencedirect.com/science/article/abs/pii/S0016787816300979

The natural gas intended to run through the Pacific Connector Pipeline would come from fracking sites in Canada and the intermountain West of the United States. Fracking uses unconventional methods to extract shale gas, 'tight oil', and coal-bed methane from deep within the earth's crust. The process of fracking is resource intensive due to the massive amount of fresh water that must be injected into deep horizontal wells to extract the fuels, and the impacts of fracking on ecosystems and agricultural lands are now known to have serious and often detrimental effects. According to Short et al. (2015), "local communities most affected by

[fracking] developments often cite considerable negative impacts on the environment and human health including groundwater contamination, air pollution, radioactive and toxic waste, water usage, earthquakes [from seismic disturbance], methane migration and the industrialization of rural landscapes" (703). The fracking boom has literally changed the topography of America, while also attracting an influx of workers who come to take advantage of high salaries and burgeoning housing markets. These "boom towns" of mostly male workers are also notorious for higher rates of prostitution, rape, violent crimes, and substance abuse (Willow 2014).

To reach the oil and gas companies must vertically drill as deep as 10,000 feet below the surface, or until the permeable shale layers, coalbeds, or tight sand is reached. Once the vertical depth is achieved, the drill is horizontally redirected into the rock layers to reach the fuels. Because the natural gases are trapped within small holes and fissures, high pressured water is pumped into the wells along with proppants (usually sand or ceramic beads) to ensure the fractures remain open. Once the rock is reached, trapped reservoirs of gas or oil are released and pumped back up to the surface. However, along with the desired oil or gas millions of gallons of toxic flowback liquid also rises and is either stored in unlined pits on the surface or pumped back down into the wells before they are sealed. Flowback liquid contains a large number of contaminants including heavy metals, hydrocarbons, radioactive material, and numerous and often unknown other toxins (Speight 2016).

For every 35,000 wells drilled within the United States each year, the Environmental Protection Agency (2011) estimates that 70-140 billion gallons of fresh water is consumed by the fracking industry. Additionally, various chemicals are used in the extraction process, many of which are known to have adverse effects on biological organisms. According to Earthworks:

> Many fracturing fluid chemicals are known to be toxic to human and wildlife, and several are known to cause cancer. Potentially toxic substances include petroleum distillates such

> as kerosene and diesel fuel (which contain benzene, ethylbenzene, toluene, xylene, naphthalene, and other chemicals); polycyclic aromatic hydrocarbons; methanol; formaldehyde; ethylene glycol; glycol ethers; hydrochloric acid, and sodium hydroxide.

Other concerns of fracking include the build-up and storage of toxic run-off; high levels of air pollution; and surface water, soil, and groundwater contamination. Although fracking has been used since the 1940s to extract oil and gas, it was not until the last decade that it became so widely employed. As the industry is in its infancy, scientists and healthcare professionals have not had the length of time needed to gather empirical data in order to understand the long-term implications that fracking has on the environment and human health (Willow and Wylie 2014). The uncertainties of extreme energy are only exacerbated by the industry's unwillingness to disclose the exact composition of the chemicals used in the fracking process, stating it is trademarked information belonging to individual energy companies and that they are not legally required to share this information with the public (Willow 2016).

2.5: Risk and Uncertainties of Pipeline and Terminal Project

Not only is the process of fracking potentially dangerous during the extraction stage, the transportation of fossil fuels via pipelines also presents enormous risks to local communities. Since the mid-1980s when pipelines began to be more commonly used as a method of transporting fuels, accidents have been steadily increasing. According to Stover of the Center for Biological Diversity (2017), "since 1986 there have been nearly 8,000 incidents (nearly 300 per year on average), resulting in more than 500 deaths…more than 2,300 injuries…and nearly $7 billion in damage. Pipeline accidents have spilled an average of 76,000 barrels per year, or more than 3 million gallons". Natural gas pipelines impose a unique threat to human communities and emergency responders as natural gas is primarily methane at the well source, and nearly 100 percent methane after the gas is refined, making it an extremely volatile and dangerous fuel

(Short et al. 2015). Today, the American landscape contains over two million miles of pipelines, many of which were constructed long ago and contain outdated materials making them more susceptible to accidents (Willow 2014).

Methane leakage is ubiquitous along the supply chain of natural gas and although "direct methane combustion releases significantly less carbon dioxide than the burning of other fossil fuels, unburned methane is a much more heat-trapping greenhouse gas than CO_2" (Center for Biological Diversity 2017). Moreover, the Intergovernmental Panel on Climate Change has stated that the impacts of methane over a twenty-year period has a global warming potential 86 times greater than that of carbon dioxide (2017). As Vaidyanathan (2015) points out, although "CO_2 persists in the atmosphere for centuries, or even millennia, methane warms the planet on steroids for a decade or two before decaying to CO_2". If approved, the Pacific Connector and the Jordan Cove Project would be the largest greenhouse gas contributor in the state, and at a time in human history when we should be transitioning to cleaner forms of energy opponents argue that approving the development of the pipeline and terminal would be a huge backwards step on climate action, and an injustice to future generations of all Oregonians.

Natural gas is also highly explosive. If approved the Pacific Connector Pipeline would transport high-pressure fuel through a region with a substantial risk of wildfires, and the Jordan Cove would be located in an area prone to the vulnerability of earthquakes and tsunamis. Moreover, the most current proposed pipeline route includes multiple release valves along the length of the pipeline as well as a 61,500-horsepower compressor station in Malin where the pipeline would connect with the existing Ruby Pipeline. Compressor stations emit volatile organic compounds (VOCs) which can be detrimental to human health, particularly to vulnerable populations such as children, pregnant women, and the elderly. According to Messersmith

(2015), “short-term exposure can cause eye and respiratory tract irritation, headaches, dizziness, visual disorders, fatigue, loss of coordination, allergic skin reaction, nausea, and memory impairment. Long-term effects include loss of coordination and damage to the liver, kidney, and central nervous system”. VOCs have also been associated with behavioral problems such as anxiety, depression, and increased aggression (8). In addition to VOCs, Messersmith argues, nearby communities are also exposed to hundreds of other toxins, hazardous particle matters, possible sources of radioactive material, noise pollution, and potential accidents (9-12). What is more, although Malin, Oregon has a population of only 805 individuals, over 57 percent of residents are of Hispanic or Latino descent (US Census 2010), arguably making the placement of a compression station there an act of environmental racism.

For Indigenous communities along the pipeline route and near the proposed terminal, this development could have a devastating impact on tribal resources including important traditional food sources such as salmon and other cultural keystone species. According to the Klamath Tribes, the proposed route “goes through areas where villages once existed and may unearth remains since graves with human remains have been found in these areas. The route also would go under the Klamath River and the Rogue River, which since time immemorial have been and continue to be important sources of fish for Tribal members” (as cited by O’Brien 2016). State and local agencies have been making a considerable effort in recent years to address the threats on salmon populations on the Rogue River through the removal of outdated hydroelectric dams, and the demolition of four dams on the Klamath River will begin in 2020 to improve fish passage and water quality (Gilman 2016). Many research participants in this study wondered why state agencies were making such an effort to restore critical salmon habitat only to place a

potentially dangerous pipeline through these same waterways, further jeopardizing the region's already compromised salmon populations.

The main justification for the placement of the pipeline through a less densely populated section of the state is that it would pose less of a risk to Oregonians as a whole; however, safety standards are downgraded in rural areas, increasing the likelihood of an accident occurring (Stover 2017). Additionally, the proposed route of the pipeline runs through mountainous and not easily-accessible areas, making response time for emergency workers longer in the event of a malfunction or accident. According to Rogue Riverkeeper (2017), one of the main organizations fighting the development, FERC does not require the pipeline to be built to the same safety standards for the entire length of the pipeline, and allows lower safety standards for rural areas because in the event of an accident fewer mortalities will occur. Current federal regulations require pipelines in rural locations to be buried at least 30-inches below the surface, and at least 36-inches in more populated areas, near roads, and by railroads. At crossings of navigable bodies of water, pipelines must be buried at least 48-inches underground (Pipeline and Hazardous Materials Safety Administration 2017). Opponents of the project argue that the safety regulations are inadequate for rural communities, and do not take into consideration the diversity of landscape and sensitive ecological habitats of the region. Geological hazards are also a concern and include landslides, erosion, stream channel migration and scour hazards, potential volcanic activity, and seismic and tsunami vulnerabilities on the coast (Baldwin 2000). Community members within the hazard zone are concerned that the combination of inadequate regulations for rural areas, sensitive geology, and the likelihood of wildfires puts them in harm's way and in extreme danger.

The Pacific Connector Pipeline construction would also involve the largest forest clear-cut in Oregon's history, and conservationists argue this will inevitably disrupt the activity of wildlife populations without considerably reducing the risks communities face in the hazard zone (Rogue Riverkeeper 2017). Because southern Oregon's climate is mild, with hot and very dry summers, the area is highly prone to drought and large wildfires. During the summers of 2017 and 2018 millions of acres burned throughout the Western United States, and southern Oregon was engulfed in flames and unhealthy levels of smoke for the majority of the warmer months. Many scientists predict that wildfires will only get worse in the coming years due to the impacts of climate change (Rogers 2018), making what many believe the placement of a pipeline carrying highly pressurized and explosive fuel through the region unconscionable at best, and an inevitable catastrophe in the making.

The Jordan Cove 500-acre facility would be located on the North Spit of Coos Bay and would include a 7-mile-long dredge for an access channel and terminal marine slip with a berth for one LNG vessel, as well as a dock for tug and escort boats; a loading platform and transfer line; two LNG full-containment storage tanks that would each hold up to 160,000 meters (5,650,347 cubic feet) of natural gas; four natural gas liquefaction trains; emergency, hazard, plant, and electrical systems; a utility corridor; a pipeline gas conditioning facility; a workforce housing complex; a 420-megawatt electric generating power plant, and various administrative and security buildings (Jordan Cove Energy Project Environmental Impact Statement 2015). The facility would then produce up to 6.8 million metric tons per annum of LNG to be shipped almost exclusively to overseas markets.

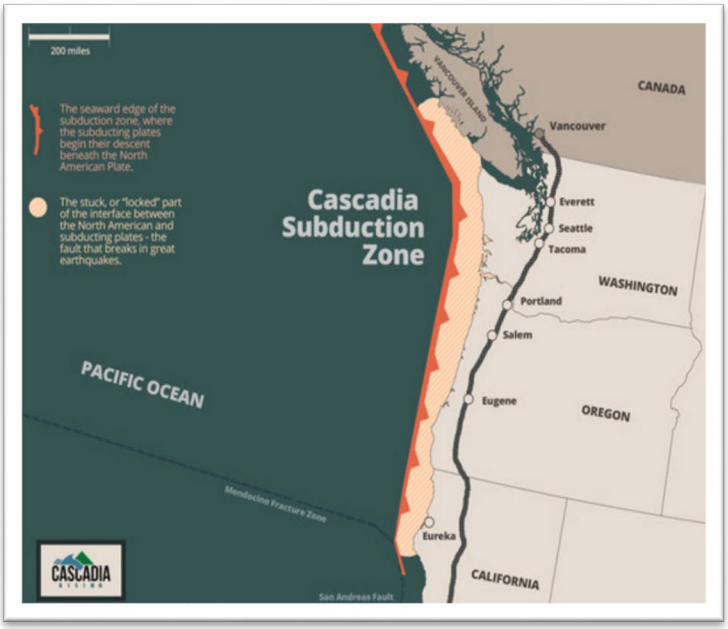

Figure 3: Bonneville Power Administration, U.S. Department of Energy 2016

The Jordan Cove facility would be built in a tsunami hazard area along the Cascadia Subduction Zone. The Cascadia Subduction Zone is a 600-mile fault which runs from northern California to British Columbia and is 70-100 miles off the Pacific Coast shoreline. According to Oregon Department of Land Conservation and Development (2015):

> Coastal Oregon is not only vulnerable to chronic coastal hazards such as coast erosion from winter storms and sea level rise, but it is also subject to potential catastrophic hazards such as a Cascadia earthquake and tsunami. These large earthquakes will occur under the ocean just offshore of our coast and can cause destructive tsunamis that can strike the coast 15 to 20 minutes after the earthquake. It is likely that in most Oregon coast communities, the only warning will be the earthquake itself. Cascadia Subduction Zone earthquakes and accompanying tsunamis occur about every 500 years, plus or minus 200 years. The last such earthquake occurred over 300 years ago. This means that we are in the time window where a destructive Cascadia earthquake and tsunami could occur, and the probability of that occurrence will continue to increase over time (3).

Jordan Cove argues that they have taken into consideration that the proposed location for their facility is located in an environmentally vulnerable area, and that their facility is designed to withstand seismic activity. The industry posits that "[a]ll the Project's critical foundations and

structures have been designed to a resist a 9.3 magnitude CSZ earthquake. Plans will also be put in place to ensure any potential hazards created by an earthquake, including soil liquefaction, are mitigated", while suggesting their "tsunami specific safety features" are designed to be up to 60-feet tall and are adequate enough to tolerate the force of a massive tsunami (Jordan Cove LNG 2017). According to the State of Oregon's Office of Emergency Management, however, a tsunami caused by a subduction earthquake could be as high as 100-feet, and that "scientists are predicting that there is about a 40 percent chance that a megathrust earthquake of 9.0+ magnitude in this fault zone will occur in the next 50 years" (2017). If these predictions are accurate, the Jordan Cove Export Terminal has a 40 percent chance of experiencing a major earthquake and/or tsunami within its lifespan, something many local residents in Coos Bay are concerned about if approval is granted for this project.

The Pacific Connector Pipeline and Jordan Cove would impact twenty-nine endangered and threatened species in the region, and would disrupt critical habitat of the gray wolf (*Canis lupus*); red tree vole (*Arborimus longicaudus*); fisher (*Pekania pennanti*); marbled murrelet (*Brachyramphus marmoratus*); northern spotted owl (*Strix occidentalis caurina*); sea otter (*Endhydra lutris*); kit fox (*Vulpes macrotis*), and the Oregon spotted frog (*Rana pretiosa*). Seven species of threatened or endangered whales are found off the coast of Oregon including the fin whale (*Balaenoptera physalus*); killer whale (*Orcinus orc*); blue whale (*Balaenoptera musculus*); humpback whale (*Megaptera novaeangliae*); sperm whale (*Physeter microcephalus*); sei whale (*Balaenoptera borealis*), and the North Pacific right whale (*Eubalaena glacialis*). Additionally, four species of endangered sea turtles could be threatened by the development including the green turtle (*Chelonia mydas*), leatherback turtle (*Dermochelys coriacea*), loggerhead turtle

(*Caretta caretta*), and the olive ridley turtle (*Lepidochelys olivacea*) (Jordan Cove Project EIS 2015).

Numerous other threatened and endangered amphibians, reptiles, invertebrates, mammals, birds, plants, and fish were also cited in the 2015 EIS. Of great concern to human communities, particularly Indigenous peoples, is the threat to the eight species of coldwater anadromous fish in the project area including green sturgeon (*Acipenser*); Pacific lamprey (*Lampetra tridentate*); coastal cutthroat trout (*Oncorhynchus clarkii clarkia*); steelhead (*Oncorhynchus mykis*); Chinook salmon (*Oncorhynchus tshawytscha*); coho salmon (*Oncorhynchus kisutch*), and chum salmon (*Oncorhynchus keta*) (Jordan Cove Project EIS 2015). Anadromous fisheries provide an important source of nutrition for Indigenous peoples as well as coastal and inland communities, and state agencies have been allocating significant time and resources in recent years to address the threats these species already encounter including the effects of invasive species, toxic pollution, climate change, and hydroelectric dams that obstruct fish passages (Crawford and Rumsey 2011).

In southern Oregon and northern California, several dams have already been removed in an effort to improve the habitat of anadromous species, and four more are planned to be removed on the Klamath River by 2020, including the John C. Boyle Dam built in 1938; the Copco Number 1 and 2 Dams built in 1922, and the Iron Gate Dam built in 1964 (Klamath Restoration 2017). The removal of hydroelectric dams in the region and elsewhere allows rivers to run freely and helps rehabilitate aquatic environments. As Larinier (2000) argues,

> The construction of a dam on a river can block or delay upstream fish migration and thus contribute to the decline and even the extinction of species that depend on longitudinal movements along the stream continuum during certain phases of their life cycle. Mortality resulting from fish passage through hydraulic turbines or over spillways during their downstream migration can be significant. Experience gained shows that problems associated with downstream migration can also be a major factor affecting anadromous or

> catadromous fish stocks. Habitat loss or alteration, discharge modifications, changes in water quality and temperature, increased predation pressure as well as delays in migration caused by dams are significant issues.

The Klamath River has experienced substantial fish kills in recent years, and a report issued by the Yurok Tribe stated that the Iron Gate Dam played a significant role in the demise of anadromous populations for many years (Belchik et al. 2004). For Indigenous peoples who depend on the nutritional and cultural importance of healthy salmon runs, the restoration of rivers like the Klamath is an essential component of addressing the impact that settler-colonialism has had on their way of life for centuries, an act of restorative justice, and a validation that their cultures have a right to exist (Klamath Tribes 2017).

2.6: Indigenous Peoples of the Region

Like elsewhere in the United States, Indigenous peoples of southern Oregon and northern California experienced a long and bloody history following Euro-American colonization. Although archaeological evidence proves that Indigenous peoples lived in the Americas for at least thousands of years (Pringle 2012), the Doctrine of Discovery and Manifest Destiny justified the violence and near genocide of Indigenous peoples throughout the New World and rationalized the dispossession of land. One of the oldest known human occupations in the United States was discovered by archaeologists near the Rimrock Draw Rockshelter outside of Riley, Oregon and dates back more than 15,800 years (Bureau of Land Management 2015). While some trading networks remotely connected Oregon tribes with European explorers long before first contact, the first recorded physical encounter between Native Americans and Europeans in Oregon was with British sea captain James Cook who traded with local tribes off the coast in 1778 (Oregon Council for the Humanities 1991). In 1792 George Vancouver, a British Explorer, and Robert Gray, an American sea captain, arrived on separate voyages to the

mouth of the Columbia River. Just a few short years after these first known encounters with Europeans, Lewis and Clark's expedition found their way to the mouth of the Columbia River as well. What followed was wave after wave of traders and settlers and the spread of European diseases, violence, forced relocation, war, and the extinction of whole tribes and many Indigenous worldviews and languages. Estimates vary on how many Indigenous peoples lived in Oregon prior to the European invasion; Lewis and Clark estimated their population was upwards of 50,000 (Erickson 2008). However, oral traditions from multiple tribes often dispute this amount and believe the populations were much higher, particularly on the coast where resources where plentiful year-round.

By the time Oregon was admitted to the Union and became a state in 1859, the vast majority of Oregon's original peoples were killed off by disease or warfare. Those who did survive were forced onto reservations, sometimes far from their original territories where their lives were short-lived due to the plethora of impacts that come with forced relocation and assimilation. What remains of the hundreds of Indigenous tribes and bands that once inhabited Oregon are nine federally recognized tribes, and five of these tribes still have traditional ties to the southern part of the state where the pipeline and export terminal are to be built. It is important to understand the historical context of what happened to the Indigenous communities of this region in order to grasp how and why settler colonialism, which will be discussed in further detail in Chapter Three of this thesis, continues to gravely impact the tribes who have ancestral connections to the land along the proposed Pacific Connector Pipeline route.

Klamath Tribes

The Klamath, Modoc, and Yahooskin band of Snake (Northern Paiute) peoples, collectively known as the Klamath Tribes, traditionally occupied the Klamath Basin in southern

Oregon and northern California for thousands of years before Euro-Americans arrived. The landscape of the Klamath Basin is diverse and spans from the eastern slopes of the southern Cascade Mountains, to the high desert plateau of south-central Oregon and north-eastern California. The wealth of natural resources in the Klamath Basin sustained Indigenous populations for generations including great quantities of salmon, mule deer, and the culturally important wokas lily (Klamath Tribes 2017). From lava flow caves, thickly forested woodlands, expansive wetlands, high desert, to the famous Crater Lake, the ancestral homeland of the Klamath peoples was one of the most biologically diverse regions in the West.

In 1864, the Klamath Tribes signed a treaty and ceded over 20 million acres of land, holding onto only a fraction of the size of their original territory, 2.2 million acres, for their reservation while also retaining the right to hunt, fish, and gather in perpetuity (Klamath Tribes 2017). Even with this great loss of land, more than half of which contained old- growth ponderosa forests, the Klamath Tribes were one of the wealthiest Native American nations in the U.S. due to the commercial value of their forestlands and their innovative ways of interacting with, and benefiting from, Euro-American settlements. Timber from the Klamath Reservation supplied a vast amount of forest products for the logging industry and although very few tribal members were employed by timber companies, every tribal member was eligible to receive a per-capita disbursement from timber sales (Klamath Tribes 2017).

In 1954, the U.S. government terminated the Klamath Tribes and dissolved the Klamath Reservation. Termination of the Klamath Tribes had an immediate and severe impact and was directly tied to local interest in exploiting the Klamath for their timberlands (Lewis 2015). In the 1950s, termination, while couched as encouraging Indigenous peoples to become self-reliant, was often a tactic used to undermine sovereignty in order to create an open access to the wealth

of natural resources found on the once undesirable lands Native Americans were allowed to remain on. Loss of federal recognition resulted in social disintegration and a severe weakening of tribal identity, but the greatest impact of termination for the Klamath Tribes was the loss of their ancestral homeland. Although their federal status was restored in 1986, their reservation was sold off to public and private entities and has never been returned to them. Termination of their federal status quickly transformed the Klamath Tribes into an impecunious community, seen today in Chiloquin, one of the most impoverished places in Oregon and the seat of tribal headquarters. Today there are over 4,500 tribal members, and the Klamath Tribes are working diligently to repair the damage white settlers brought to their land and culture, and to become economically prosperous again (Klamath Tribes 2017).

Confederated Tribes of Siletz Indians

The Confederated Tribes of Siletz Indians are made up of several tribes and bands that once occupied the entire western portion of Oregon and into northern California. As the Confederation is made up many different tribes and bands, distinction between cultural groups is often categorized through linguistic distinctions (Confederated Tribes of Siletz Indians, n.d.). The Siletz tribes and bands who once lived in southern Oregon before being forced to relocate to the north include the Tutini, Chetco, and Athabaskan Taltushtuntede Galice Creek and Dakubetede Applegate. Some members of the Siletz bands or tribes from the Siuslaw/Lower Umpqua, Coos, Coquille, Upper Umpqua, Takelma, and Shasta Tribes were relocated to the Siletz Reservation and remained, while others reside on their own tribe's reservation or were confederated into other tribes such as the Grande Ronde Tribes (Confederated Tribes of Siletz Indians, n.d.). Each of these tribes and bands had their own unique culture, history, and relationship with the federal government. The linguistic diversity alone found in the Siletz Tribes

is a testament to the complexity of the Confederation, with at least four unrelated language families present including Athabaskan, Penutian, Salishan, and Hokan, and dozens of languages and dialects (Oregon Council for the Humanities 1991,107). As a result of these diverse languages and cultural practices, assimilation proved difficult in the early stages of reservation life and added enormous strain on the Tribes as they attempted to adapt to a completely foreign environment.

The southern Oregon Siletz Tribes' traditional territory is both ecologically and geologically diverse with the Cascade Mountain Range running north to south, and the Klamath-Siskiyou Mountain Range running east to west. With its high volcanic peaks and its white-water rivers, the region supports a mosaic of habitats and species. According to Olsen et al. (2017),

> The Klamath-Siskiyou ecoregion is considered a global center of biodiversity (Wallace 1982), an IUCN Area of Global Botanical Significance (1 of 7 in North America), and is proposed as a World Heritage Site and UNESCO Biosphere Reserve (Vance-Borland et al. 1995). The biodiversity of these rugged coastal mountains of northwestern California and southwestern Oregon has garnered this acclaim because the region harbors one of the four richest temperate coniferous forests in the world (along with the Southeastern Conifer forests of North America, forests of Sichuan, China, and the forests of the Primorye region of the Russian Far East), with complex biogeographic patterns, high endemism, and unusual community assemblages.

Before colonization by Euro-Americans in the mid-1850s, southwestern Oregon was thickly forested; however, much like in Klamath County trapping, deforestation, and mineral extraction began as soon as white explorers and settlers arrived, scars of which can still be seen on the landscape today.

Unlike Euro-American settlers, Native Americans of southern Oregon did not farm; they lived on a diet rich in wild foods including deer, elk, bear, mountain lion, antelope, salmon, wild vegetables, berries, fowl, camas, acorns, and insects (Ashland Parks and Recreation Department 2012). Seasonal mobility allowed Native Americans of southern Oregon to acquire food year-

round, spending summer months in higher elevations and the colder winter months in the valley floor. Although they subsisted on wild foods, Indigenous peoples in the region managed the landscape extensively, particularly with the use of fire. Burning vegetation added nutrients to the soil and cleared brush to open up the landscape for grazing animals.

To promote homestead settlement in the Oregon Territory, Congress passed the Donation Land Claim Act in 1850. The Act gave each settler 320 acres and married couples 640 acres with the provision of developing western lands for agriculture (U.S. Legal 2017). At the same time, gold was discovered in Oregon Territory which brought an influx of thousands of miners to the area. Treaty negotiations began in 1851 and over the course of just a few years, 15 million acres of land was ceded to the U.S. Government from the Siskiyou Mountains in the south to the Columbia River in the north, and from the Cascade Mountains in the east to the Coastal Range in the west (Confederated Tribes of Siletz Indians, n.d.).

The U.S. broke many treaties with Indigenous peoples throughout the west through the implementation of the Homestead Act of 1862 when 1.5 million homesteads were granted west of the Mississippi River, and an additional 300 million acres was taken from Native Americans and cheaply sold to white settlers and private industry (Dunbar-Ortiz 2014, 141). The original Siletz Reservation, which was over 1.1. million acres and covered a 120-mile stretch in western Oregon, was fragmented into allotments by the Homestead Act creating the ‘checkerboard reservation’ that still exists today.

Like the Klamath Tribes, the Confederated Tribes of Siletz Indians also lost federal recognition in the 1950s, dissolving their reservations and sanctioning the sale of their tribal lands. However, the Siletz Tribes federal recognition was reinstated under the Siletz Restoration Act of 1977, only the second Indigenous nation in America to receive restoration (Confederated

Tribes of Siletz Indians, n.d.). Today there are 5,100 tribal members with a reservation of 15,000 acres, a small percentage of the 1.1 million acres of their original reservation, and a mere fraction of the vast traditional territory that once made up their homeland.

Cow Creek Band of Umpqua Tribe of Indians

The Cow Creek Band of Umpqua Tribe of Indians of southwestern Oregon were one of the first tribes in the state to sign a treaty with the U.S. Government. Much like their neighbors in the south, they first encountered white explorers and fur traders in the early 1800s. What followed was a wave of white settlers who arrived by the late 1840s seeking gold, and who brought with them measles and small pox which had a devastating impact on the Tribe's population. The Cow Creek Band of Umpqua Tribe's original territory stretched from the Cascades to the coast in the Rogue and Umpqua watersheds. They subsisted on salmon, lamprey, freshwater mussels, deer, elk, bear, berries, and camas. Much like the Siletz Tribes they too worked in seasonal rounds, spending summer months in the higher elevations and the cold winter months in the valley floor. In April of 1854, the Cow Creek signed a treaty with the U.S. Government and ceded nearly 500,000 acres, leaving them completely dispossessed of their tribal lands entirely (Cow Creek Band of Umpqua Tribe of Indians 2017).

Between 1918 and 1932, the Cow Creek fought to win the entitlement of their traditional land back but were denied each time. In 1954 under Public Law 588, also known as the Western Oregon Indian Termination Act, federal recognition of the Cow Creek Tribe was terminated (CCBUTI 2017). Even after termination the Tribe continued to seek a lands claim base, and each time they were denied what had been promised to them since their treaty was signed in 1854. However, since they "received no prior notification of the Termination Act, as required by law, [they were] able to obtain presidential action in 1980 to take a land claims case to the U.S. Court

of Claims. The Court of Claims case was subsequently litigated by the Tribe to a negotiated settlement of $1.5 million" (Cow Creek Band of Umpqua Tribe of Indians 2017), and their federal recognition was restored in December 1982. The Tribe put this money in an endowment and only withdraw the interest to invest in education, economic development, and housing for tribal members. Of the 1,594 enrolled members of the Tribe, many still live on their traditional homeland near present day Canyonville where the Tribe has been working to buy portions of their land back in order to finally have legitimate claim to what has always been legally and rightfully their own.

Coquille Indian Tribe

The Coquille Indian Tribe have lived on the south-central coast of Oregon for thousands of years, and their traditional territory once consisted of more than 750,000 acres (Coquille Indian Tribe 2017). Like other Native Americans across the state, the early 1800s marked the beginning of European and Euro-American exploration, settlement, and resource exploitation and depletion. Pandemic diseases in which the Tribe had no immunity to is believed to have reduced the population of the Coquille Indian Tribe by as much as 90 percent (Coquille Tribe, 2017).

Prior to Euro-American colonization, the Coquille Tribe lived in villages between present-day Bandon and Myrtle Point along the tidewaters and the lower and upper Coquille River, as well as near other streams and rivers in the vicinity. The archaeological record also shows that they lived as far north as Lower Coos Bay at South Slough (Coquille Indian Tribe, 2017). Resources were abundant along the coast and the Tribe subsisted on a variety of fish, marine and land mammals, shellfish, nuts and seeds, berries, wild vegetables, and root plants.

By the 1850s white settlers moved into the Tribe's traditional territory and much violence and suffering followed. In 1851 and 1855 treaties were signed with the U.S. government, and the Tribe ceded more than one million acres of land (Coquille Indian Tribe 2017). The Coquille Tribe were coerced into signing a treaty without the knowledge of written language nor the concept of private property. They ceded their land to the newcomers in exchange for the false promise of provisions, funds for education, and most importantly a permanent land base within their traditional territory (Coquille Indian Tribe 2017). These treaties, however, were never ratified and like the Cow Creek Tribe, the Coquille were left landless. Without a land base the Coquille were forced to relocate to the Siletz Reservation, although some tribal members remained on their traditional homeland by marrying white settlers (Coquille Indian Tribe 2017).

Along with 61 other Oregon tribes and bands who lived west of the Cascade Mountains, the U.S. Government terminated its trust relationship with the Coquille in 1954 with the passing of the Western Oregon Indian Termination Act. For decades, the Coquille Tribe fought to regain their sovereign rights, and in June 1989 their federal recognition was restored. As the Tribe points out, "Passage of this crucial legislation rapidly led to other milestones: adoption of a Tribal Constitution; construction of The Mill Casino; designation of the 5,400-acre Coquille Tribal Forest; and establishment of health, education and housing services to Tribal members". (Coquille Indian Tribe 2017). The Coquille Tribe has a population today of nearly 1000 members, and contributes over $20 million a year into local salaries and benefits as they believe that in order for their nation to be strong the community they live in must be strong as well (Coquille Indian Tribe 2017).

Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians

The Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians are a confederation of three tribes including two bands of Coos, the Hanis Coos (Coos Proper) and the Miluk Coos, the Lower Umpqua Tribe, and the Siuslaw Tribe. The Tribes traditional territory on the south-central coast of Oregon in present day Coos County once spanned over 1.6 million acres and extended from the coast line into the thickly forested Coast Range. Resources were abundant, and they subsisted on a large supply of salt and fresh water fish; marine mammals; beaver; elk; deer; shellfish; berries, and a wide variety of wild plants and fruit (Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians 2016).

Trade began with European explorers in the late 1700s, and soon after European diseases spread through the villages of the Tribes and decreased the population by at least half (Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians, 2016). The Tribes signed a treaty in August 1855 with the promise of receiving a land base and funds for provisions, education, and housing. This treaty was never ratified, and in 1856 the Tribes were forced to march to Fort Umpqua where they were imprisoned due to the Rogue River War even though they did not participate in the war and their relations with whites were relatively peaceful comparatively (Coos History Museum 2017). In 1860 they were forced to march again and were imprisoned for 17 years at the Alsea subagency in Yachats until they were permanently assigned to the Siletz Reservation (Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians 2017). In 1876, they were released and allowed to return to their homeland. Many did. In 1941 the Bureau of Indian Affairs placed a 6.12-acre parcel in trust for the Tribes, and today their land base equates to only 415 acres.

The Tribes' federal recognition was also terminated in 1956, and much like other Oregon tribes previously discussed the termination years severely impacted the Coos Tribes. Federal recognition was restored in 1984, and since then the Tribes have not only regained their sovereignty, they have built successful enterprises and work to promote, protect, and preserve their history, culture, and the social and economic wellbeing of their nearly 1000 members.

For the Karuk, Hoopa Valley, and Yurok Tribes of northern California the same history holds true, as the ethnographic chapter of this thesis will highlight. The displacement of land; depopulation caused by European diseases; destruction of tribal territories for resource extraction, and settler colonial structural exploitation and genocide were common events here and throughout North America. The injustices of the past may present itself differently in contemporary times, but they do in fact still exist. Perhaps this is nowhere more apparent than how Indigenous peoples are treated by extractive industries, and the U.S. Government's willingness to generously subsidize corporations that are not only causing massive environmental degradation and accelerating climate change, but that are also disregarding the human rights of Indigenous communities that had everything taken from them in the past.

2.7: Conclusion

As this chapter pointed out, hydraulic fracturing is dangerous to both the environment and human life, as are the pipelines and other infrastructure that transport fossil fuels, especially for vulnerable communities that already face marginalization. Southern Oregon and northern California contains some of America's most pristine landscapes and intact biodiversity. It is a region increasingly susceptible to the impacts of climate change, catastrophic wildfires, an inevitable subduction zone earthquake, and tsunamis. It is also made up of communities seeking to repair the landscape, restore important cultural keystone species such as salmon, and heal the

wounds of historical trauma caused by settler colonialism. As the next chapter will indicate, the Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal presents unique threats to the tribes and other community members in the region who are concerned about their health, safety, the environment they depend on, and their cherished traditional lands. Since the development was first proposed over a decade ago, people have been resisting it and building a strong alliance made up diverse communities that believe they have everything to lose and little to gain by this development.

Chapter Three: Ethnographic Study

Section 3.1 Introduction

The proposed Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal in southern Oregon has raised serious concerns for tribes, landowners, and other community members who live within the hazard zone of the future development. The potential risks associated with the project include not only natural gas leaks, spills, explosions, structural collapse, and other potentially catastrophic system failures, when coupled with the possibility of natural disasters such as wildfires, floods, tsunamis, and earthquakes the proposed pipeline and terminal has left many residents in fear for their tribal territories, their property, their lives, and the overall future of their communities. Considering that since 1998 there have been more than 500 fatalities, 2300 injuries, and 7 billion dollars in damage caused by pipeline incidents in the United States (Pipeline and Hazardous Materials Safety Administration 2017), residents within the hazard zone have seemingly every right to be concerned.

The purpose of this chapter is to highlight the risks and uncertainties that community members associate with the proposed pipeline and terminal, and to illustrate the resistance campaign that has brought together diverse communities throughout the region that have worked diligently for over a decade to prevent the development from going through. By utilizing the conceptual frameworks of environmental justice, settler colonialism, and the anthropology of energy and extraction, this chapter will explore the correlation between the social and environmental inequity often imposed on Indigenous peoples and lower income communities alike when faced with fossil fuel development in rural landscapes.

3.2: Positionality and Research Methods

Although a mixed-methods approach was the original intention of this study, namely including a social network analysis of the resistance movement, participants expressed concern about the sensitive nature of this project and the apprehension they had about the industry using this information in their favor. Instead, a qualitative approach was chosen in order to gain a deeper understanding of participant's concerns, motives, and lived experiences, as well as to focus attention on the narrative of community members and the alliance they have built with one another to prevent the proposed project. There is a growing need for sound anthropological studies that analyze the impacts fossil fuel development has on local communities, particularly vulnerable populations whose voices often go unheard. As Willow and Wylie (2014) point out: "[q]ualitative research in anthropology and related fields is uniquely positioned to address the experiential dimensions of energy development" (226) as anthropologists are trained to understand and analyze complex situations that are often hard to quantify, such as emotional responses to large-scale developments or spiritual connections to landscape. Although quantitative research may be viewed in many circles as being 'less biased' and thus having more merit, one could argue that all researchers are influenced by their own subjective nature and processes, and therefore no one can be truly 'objective' (Bernard 2011, Ervin 2005). Moreover, qualitative research can help elevate underrepresented voices of those impacted the most by large-scale energy projects and prove to be a useful tool in the risk assessment process (Checker 2007).

That said, I must be truly transparent. My positionality is one of advocacy anthropology. I affirm that the right to a healthy environment is a fundamental human right that should be guaranteed to *all* people regardless of their cultural or socioeconomic background. Since the days

of Franz Boas, anthropologists have long been advocates for cultural groups and our collective human community, particularly in regard to equitable treatment. As Ervin (2005) argues, "anthropology cannot avoid advocacy if it wishes to engage in contemporary practice…[and] those whom we study are unlikely to tolerate our presence if we satisfy our academic curiosity without giving something in exchange" (145). Advocacy anthropology lends itself well to the complexities of the social and environmental problems of our times as our discipline seeks to grasp the human condition while also applying our knowledge towards the betterment of our species. Along with the ethical principle that our discipline has a moral and social responsibility to the communities we serve and work with, we also have the ability to directly influence policies that better reflect the needs and values of vulnerable groups.

Additionally, my positionality is one of activist anthropology. As the following pages will reflect, I lived in the region where this study took place for the majority of my life and worked on many environmental and social justice issues in my community. My roots are in activist work, and it is because of this work that I eventually found my way to academia and the writing of this thesis. I consider myself both a social scientist *and* an activist, and do not see the need for each of these positions to be mutually exclusive. This positionality proved to be advantageous during my fieldwork as I already had rapport with my participants, and most stated that they would never speak to just any researcher on this issue because too much was at stake for them. I was a non-neutral observer. I was someone who lived in this bioregion long enough to know it is both fragile and incredibly biodiverse. My connection to this place and the communities that live there certainly guided my work; however, I also argue that it made me a stronger researcher. As Hale (2002) argues,

> Activist research endorses the contrasting tack of making our policies explicit and up-front, reflecting honestly and systematically on how they have shaped our

> understanding of the problem at hand, and putting them to service of our analytical endeavor (14).

When out in the field, however, I was an anthropological researcher rather than an activist. I was also committed to 'getting the story right' so that my academic work could possibly be of some use to the communities who so graciously shared their time and words with me.

After carrying out this research project and gaining a deeper understanding of the LNG supply chain, how the Pacific Connector Pipeline and Jordan Cove Terminal will impact local communities and the environment, and how these communities perceive the risks and uncertainties of this project, my opinion that this pipeline should not be built is even stronger than it was before. That is the position I take.

After reviewing the literature on the natural gas industry, I attended and engaged in participant observation at over 50 events including information sessions, rallies, demonstrations, planning meetings, community forums, Indigenous story telling events, workshops, public comment sessions, and other occasions where community members met to share knowledge, build solidarity networks, and come together to show their resistance to the proposed development. Thirty-one semi-structured interviews were carried out using snowball sampling during fall 2017 and winter 2018 via phone, email, video chat, as well as in person. Research participants included individual tribal members, landowners, environmental justice lawyers, activists, wildland firefighters, organizational representatives, and other community members from diverse backgrounds in both southern Oregon and northern California. Participants ranged in age from early twenties to mid-seventies, and many have been active in the resistance campaign since the development was first proposed.

Variable		Number of Subjects	Total
Age	20-30	4	
	30-40	9	
	40-50	7	
	50-60	6	
	60 and over	5	
Gender	Female	17	
	Male	12	
	Non-Binary	2	
County of Residence	Klamath	7	
	Jackson	13	
	Douglas	7	
	Coos	4	
Stakeholders	Indigenous Person	7	
	Property Owner	7	
	Farmer; Rancher; Fisherman/Woman	3	
	NGO Representative	5	
	Activist	8	
	Other (community member not affiliated w/ any group, etc.)	1	
Total			**31**

On average each interview lasted for one hour, sometimes more, and over 36 hours of data was transcribed into more than 350 pages of testimony. A daily diary was also kept to document personal notes and information gathered during participant observation at the many events I attended during fieldwork. Data was then analyzed to look for common themes in what participants shared (Bernard 2011:337-345). Although I could not include all of the data collected in this thesis due to page limitation, the narrative that is included is a reflection of what all research participants were most concerned about. With the exception of two individuals who gave permission to use their name in this study, pseudonyms were used to protect the identity of research participants.

The purpose and significance of the fieldwork portion of this research was to conduct an ethnographic study of communities within the affected zones in order to understand how they individually and collectively perceive the risks and uncertainties they face, and to become familiar with how these communities and local organizations forged a strong and stable alliance to assert their opposition to the development. Although interviews were semi-structured to allow participants the autonomy to share what they found to be most pertinent to the scope of this study, three key questions were addressed:

1. How do communities and individuals within the hazard zone perceive the risks and uncertainties of this development, and what are their greatest concerns in the event that the development is carried out?
2. How do these concerns coincide or differ from the industry's and agencies' risk assessment process, specifically in relation to social and cultural risks?
3. In what ways are community members resisting the development, and how have alliances been built across diverse populations in both Oregon and northern California?

As mentioned, research participants were chosen by snowball sampling; however, those that participated in the early part of this study were individuals I was previously affiliated with and aware that they were working on the campaign to stop the pipeline. Although attempts were made to include industry workers in this study, I was told by one representative that a lawyer would need to be present, to which I agreed, however attempts to schedule interviews were unsuccessful.

Section 3.3: Conceptual Framework: Environmental Justice and Settler Colonialism

Environmental justice is both a theoretical concept and a social movement that was pioneered by African Americans, Indigenous peoples, Latinos, Asians, and Pacific Islanders fighting against environmental racism in their communities**.** Although marginalized communities have been exposed to environmental injustice for decades, and have been active in protecting their communities and the environments they depend on for centuries, it is a widely held opinion that the movement had its start during the Civil Rights Era when just before his assassination Dr.

Martin Luther King Jr. went to Memphis to advocate on behalf of striking Black garbage workers who were fighting for equal pay and healthier working conditions (Bullard and Johnson 2000, 556). The movement only came to be known on a larger scale when in 1982 residents of Warren County, North Carolina opposed the proposed development of a toxic Polychlorinated Biphenyls (PCB) landfill that was to be built in the town of Shocco where the population was 75 percent African American (Purdy 2018). Over 500 activists were arrested during the struggle to defend their community, bringing national attention to the all-too-common issue of environmental racism that marginalized and rural communities in America often contend with.

Since the 1980s, the environmental justice movement has grown to thousands of organizations across the U.S. that seek to address the disproportional burden imposed upon disenfranchised communities when it comes to the presence of polluting industries, resource extraction sites, toxic waste, and contaminated material disposal where they live, work, and play**.** Although there have been many successes attributed to the movement since its inception, environmental injustice continues to be a widespread phenomenon throughout the United States due to the growing disparity between oppressed peoples and more affluent populations (Graeber 2014), as well as the increasingly widespread ecological degradation caused by resource extraction and other toxic industries (Bodley 2012).

In response to the expanding socio-economic inequalities in the U.S., environmental justice activists have included access to quality schools and education, adequate housing, and sustainable employment into the issues they address when trying to change public policy for the betterment of lower income people and communities of color (Checker 2007, 113). What makes this movement unique as well as strong is the intersectionality of both the injustices it seeks to address and the diverse communities it brings together, creating solidarity networks among

historically subjugated groups while also exposing the commonalities they share in both social and environmental realms (Schlosberg 2007).

To understand how environmental injustice is produced, maintained, and perpetuated in a nation known for its richness in resources, undeveloped and vast landscapes, and a seemingly robust economy, it is important to recognize how the main federal agency that oversees environmental issues in the U.S. incorporates the concept of environmental justice into government policies and mitigation.

The United States Environmental Protection Agency (EPA) was formed in 1970 in response to the widespread public concern over air, water, and other forms of pollution plaguing the American landscape (EPA 2018). Since it was established, the EPA has been the leading federal agency in charge of environmental research and setting, enforcing, and monitoring environmental regulations (EPA 2018). The EPA first recognized environmental justice as a principle in November 1993 after years of pressure from oppressed communities, and in that same year it established the Office of Environmental Equity, now known as the Office of Environmental Justice.

The EPA defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies", while also having equal access to goods and resources (2018). Although the EPA states that its goal is to ensure *all* communities are protected from environmental hazards and *all* should have equitable rights, the fact of the matter is that millions of Americans continue to live and work in unsafe and unhealthy environments. Some argue that on paper the EPA's standard of

environmental protection for all communities seems sound and just, however, in reality it has many flaws. As Austin and Schill (1991) and Bullard (1992, 1993c) posit:

> The dominant environmental protection paradigm institutionalizes unequal enforcement; trades human health for profit; places the burden of proof on the "victims" and not the polluting industry; legitimates human exposure to harmful chemicals, pesticides, and hazardous substances; promotes "risky" technologies; exploits the vulnerability of economically and politically disenfranchised communities; subsidizes ecological destruction; creates an industry around risk assessment and risk management; delays cleanup actions; and fails to develop pollution prevention as the overarching and dominant strategy (as cited in Bullard and Johnson 2000).

The only law that remotely addresses environmental justice in the U.S. is Executive Order 12898, or the "federal action to address environmental justice in minority and low-income populations", which states that "its purpose is to focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities" (EPA 1994). The limitations of this order include only recognizing two 'classes' of protection – race and socioeconomic status. Moreover, only human health and material damage is included in the order, leaving out other important issues such as the protection of cultural resources and cultural keystone species. Lastly, Executive Order 12898 only pertains to federal agencies, and ignores state and local accountability to marginalized groups. For these reasons, environmental justice as it is referred to and carried out by federal and state agencies has grossly failed vulnerable communities, and even though the environmental justice movement has evolved and brought about enormous positive changes in the U.S. and abroad, the only way for justice to truly be served is to address the structural factors that produce *all* forms of oppression in the first place (*see Bodley 2012*).

Mainstream theory and practice of environmental justice by the EPA also fails to consider the rights of the environment. This failure clashes with many different cultural value systems, in particular Indigenous cultural systems, as is the case with the proposed development

of the pipeline and export terminal in southern Oregon. As Native American tribes are sovereign nations with distinctive legal and political status, environmental justice is a much deeper concern as it includes treaty rights and incorporates the right to cultural identity, language, heritage, and traditional lands (Stavenhagen 1995, Das 1994). Indeed, "tribal histories, beliefs, physical and spiritual subsistence, and their very identity are often dependent on particular places, resources, and environmental conditions that tribes themselves have the inherent right to determine" (LaVelle 2001; NEJAC 2000, as cited by Zaferatos 2006, 897). As Vickery and Hunter (2016) point out, those with more power and influence are not subjected to the same environmental hazards that vulnerable communities face, and in the case of Indigenous communities who endured near genocide throughout the United States, environmental injustice in the modern era is directly linked to both white supremacy and settler colonialism. Settler colonialism *is* environmental injustice as it violates the rights of Indigenous peoples and systematically erases the socio-ecological frameworks in which they depend on, and which they culturally and morally believe they have a responsibility to preserve.

In the discussion of fossil fuel development in the United States, the legacy of settler colonialism is an important framework to use in order to truly understand why and how Indigenous communities must fight for their homelands despite their standing as sovereign nations. According to Whyte (2018), a Potawatomi scholar and activist,

> Settler colonialism refers to complex social processes in which at least one society seeks to move permanently onto the terrestrial, aquatic, and aerial places lived in by one or more other societies who already derive economic vitality, cultural flourishing, and political self-determination from the relationships they have established with the plants, animals, physical entities, and eco- systems of those places (156).

Settler colonialism is more than just an historical event where Euro-American settlers of the past invaded Indigenous territories, robbed the land of resources, and committed acts of violence and

genocide against Native nations. Settler colonialism is also violently structural and exists in the present tense through the practices, processes, and policies carried out under neoliberal capitalism (Whyte 2017). Resource extraction and the building of pipelines on and through traditional lands is a prime example of the structural components of settler colonialism. Government agencies partner with private corporations with the aim of profiting off the land at any cost, often dismissing the sovereign and human rights of Indigenous nations while perpetuating and justifying structural racism (Cantzler and Huynh 2016).

At its core settler colonialism is "inherently eliminatory", and as Wolfe (2006) notes, the main motive for elimination is access to land (388). Along these same lines, Dunbar-Ortiz (2014) argues that "as an institution or system, [settler colonialism] requires violence or the threat of violence to attain its goods. People do not hand over their land, resources, children, and future without a fight" (8). The process of elimination goes beyond genocide or forced removal; it also includes imposed social, cultural, and political assimilation (Sturm 2017, 342). However, if assimilation is not achieved settler colonialism and its aspiration to acquire land and resources must still find a way to eliminate unwanted populations. Since outright genocide is usually strongly condemned in contemporary times, Indigenous peoples must be dispossessed of their land by other methods.

As mentioned, a notable example of settler colonialism expansion in the modern era can be seen in the practices of the fossil fuel industry. The U.S. Government massively subsidizes the industry (Oil Change International 2018), while also sanctioning the infringement on the treaty rights of sovereign Native American tribes. This was made apparent during the Indigenous stand-off at the Standing Rock Sioux Reservation in North Dakota in 2016 and 2017.

The Standing Rock Sioux brought both national and international attention to the environmental injustice issues Indigenous peoples face. They were joined by over 300 other Native American tribes and were met with state-sanctioned violence as they defended their traditional territory from the Dakota Access Pipeline (DAPL). Police and security for Energy Transfer Partners, the corporation behind the DAPL, used brutal force on the tribes and their supporters including deploying tear gas and pepper spray, shooting rubber bullets; using attack dogs; spraying them with water cannons during freezing conditions, and arresting hundreds of water protectors while keeping them in kennel-like enclosures during detainment.

It is important to clarify that the Standing Rock Sioux and their supporters considered the events at Standing Rock to be more than a resistance movement against the pipeline; to many it was "really a ceremony, prayer, and water protection" (Whyte 2017, 156). As the pipeline was built through the sacred grounds and traditional territory of the tribe, ceremony was seen as an essential cultural component to defending their land and ancestors who were buried there. They did not refer to themselves as "demonstrators" the way certain media outlets and government agencies did. Instead, they were there to protect a place the tribe has had a deep connection to for time immemorial.

The Standing Rock Sioux were not only defending their sacred lands against yet another form of U.S. neocolonialism, nor were they merely acting on behalf of environmental justice for themselves and the 17 million Americans who live downriver from them; they were also defending the inherent rights of the Mnisose, the Missouri River. The Standing Rock Sioux affirm that water is alive, and refer to it as mni wiconi, or "water is life". Valandra (2017), a member and scholar of the Great Sioux Nation, argues: "That water is alive – and therefore possesses personality or personhood – defines our cultural response to the DAPL. Our definition

challenges the West's anthropocentrism, which accords person/peoplehood only to humans". This is perhaps one of the most important distinctions between Indigenous cultures and Western ones. Where Euro-Americans see profit in the form of natural resources, Indigenous peoples see a living biotic world with its own inalienable rights worthy of protection (Morgensen 2011; Preston 2013; Whyte 2017; Wolfe 2006).

The resistance at Standing Rock may have broken the silence on the injustices endured by Indigenous peoples across America and elsewhere, but it is only one of many examples of how the fossil fuel industry commits crimes against humanity and the environment, particularly in the case of vulnerable populations. The original route of the DAPL was supposed to be built near Bismarck, North Dakota; however, community members in Bismarck, most of whom were white, protested the route in order to protect their own water source. The DAPL was eventually rerouted and constructed just north of the Standing Rock Sioux Reservation, an act that many believed to be nothing short of environmental racism (Thorbecke 2016). Dispossession of land is the foundation of all settler colonial societies, and what happened to the Standing Rock Sioux is an all-too-common example for many Indigenous communities, including the tribes along the route of the Pacific Connector Pipeline.

As the proposed Pacific Connector Pipeline and the Jordan Cove Terminal would impose on the traditional territories of five Oregon and three northern California federally recognized tribes, thousands of Indigenous peoples in both states would be impacted. Many of the same issues that caused great concern for the Standing Rock Sioux over the DAPL threaten the southern Oregon and northern California tribes as well. In a statement made to the Oregon State Historic Preservation Officer in September 2017 about the Jordan Cove Energy Project, the Klamath Tribes argued that the construction of the pipeline,

> would take place on lands that are within the traditional territory of the Klamath Tribes, and where there are located many significant cultural resources of cultural importance to the Tribes. The route of the LNG pipeline…shows it going through areas where villages once existed, and it may unearth human remains since graves with human remains have been found in these areas. The route also would go under the Klamath River and the Rogue River, which since time immemorial have been and continue to be important sources of fish for tribal members (as cited by O'Brian 2016).

In November 2016, Karuk Tribal Chairman Russell 'Buster' Attebery issued a statement on behalf of the tribe, stating that "with our fisheries and water quality already compromised, we simply cannot afford the risks associated with running a natural gas pipeline beneath the Klamath River" (as cited by Bacher 2016). The Yurok Tribe also issued a statement in November 2016 arguing that "the impacts to salmon, other fish and native wildlife, in combination with the inherent risks to human populations, are unacceptable" (as cited by Bacher 2016).

The Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians submitted a Motion to Intervene with FERC in October 2017 stating;

> Since time immemorial, the Tribe's members have served as the stewards and caretakers of all these lands, waters, and sacred places. If these Projects are approved, they will directly impact the Tribe's numerous cultural resources within Jordan Cove and the surrounding area, and along the [pipeline] route that traverses the Tribe's ancestral homeland. For more than a decade, the Tribe has fought to protect these same lands, waters, and sacred places from disturbance, damage, and destruction threatened by prior iterations of these Projects (as cited by Rogue Climate 2017).

With strong tribal and landowner opposition this begs the question: if federally-recognized tribes are sovereign nations protected by both federal and international law, and if the property rights of landowners are also legally protected, how can the U.S. Government legally justify giving permission to a Canadian-based fossil fuel corporation to construct a pipeline and export terminal through Indigenous and private lands? That is what many of the participants in this study wanted to understand, and along with the detrimental impacts on the environment, that is what all of them were most distraught about.

Section 3.4: Ethnographic Fieldwork

When I set out to do fieldwork on the proposed Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal in early fall of 2017, I was not following the path of early anthropologists who explored unfamiliar territories or cultural groups. Instead, I was returning home to a region I had lived in for a quarter-of-a-century. I knew these mountains and pristine river valleys, and the smell of the forest after a long, hot, and dry summer was etched into my memory. The way the sun tilted just below the tallest peaks this time of year, and the way birds and small mammals scurried about gathering food for the long winter ahead, was something I had witnessed throughout my adult life dozens of times before. I know the southern Oregon and northern California landscape in a way one only can after experiencing the change of seasons year after year. Yet, I did not come from this place the way the Indigenous peoples of this area do. Instead, I was a transplant from New York City when I first arrived there all of those years ago searching for a better life. Who I am, however, is someone who fell in love with this bioregion, and someone who believes it to be uniquely special and worth protecting.

As I drove down the I-5 corridor on route to northern California to a community action meeting that was to be held in Orleans in late September, just as I passed Roseburg, Oregon it occurred to me that I had now entered what activists called “the hazard zone”. The pipeline’s proposed route would cross under the interstate between Roseburg and Canyonville, snake its way over steep terrain, and would cross under and over 400 streams and rivers before terminating on the coast where the gas would liquified prior to export. Northern California might seem like a long way from the proposed pipeline route, however, just 200 miles north-east of Orleans the pipeline would cross under the Klamath River near Keno, Oregon, threatening the lives and livelihoods of thousands of community members who live downriver.

The summer of 2017 was a particularly devastating year for wildfires in Oregon where close to 500,000 acres burned; northern California experienced much of the same. After turning off of Redwood Highway from Cave Junction, I drove south for three hours on Hwy 96, otherwise known as "The Bigfoot Scenic Highway" which runs parallel to the Klamath River. This area is incredibly remote, and it was easy to see why community members are so concerned about this pipeline. The trees along the steep canyons were charred black and brown from fires that took place just weeks before my arrival, and there were numerous stations set up for wildland firefighters all along the highway.

I accidently passed the Karuk Natural Resource Department office where the action meeting was to be held and went all the way down Hwy 96 to the Hoopa Valley Reservation, about 30 minutes south. I turned back around after asking for directions at a gas station in Hoopa, passed several more fire trucks along the way, and when I arrived at the correct location for the meeting there were firefighters unloading their equipment and cleaning out their trucks in the parking lot. I was told later on that the Karuk Natural Resource Office also served as a resting place for firefighters where they could use the facilities between calls.

Despite my detour, I arrived at the meeting just in time for dinner. About 60 people were present including Indigenous and non-Indigenous members of the local community. I met an old friend that I had known for many years during my time in southern Oregon who I will call C, and she introduced me to both tribal members and local activists who were part of the coalition resisting the pipeline. C had mentioned that until recently northern Californian activists fighting the pipeline had not had a strong solidarity network with those in southern Oregon. When people on both sides of the state border realized the need to find a common ground, tribes, land owners, environmental activists, and other community members came together with two main objectives

in mind: 1) to stop the pipeline, and 2) to build a robust climate movement with local conservation as their guiding principle.

Community members at the meeting in Orleans spoke openly about how although members of the alliance may have very different values, they were committed to one another and to "plan and strategize so we can move forward in a good way". There had just been a regional alliance gathering in Butte Falls, Oregon earlier in September where members of the resistance from all over Oregon and northern California discussed what types of tactics might be most successful in raising awareness about the dangers of the pipeline. A Karuk tribal member who was present went to this event and shared what was talked about. Educating people throughout southern Oregon and northern California was one of the most important strategies discussed, with the understanding that those affiliated with the alliance defined their own roles both individually and as a community. She mentioned how the alliance was trying to seek out more researchers who understood both the environmental and social consequences other rural communities have faced throughout North America as a result of pipeline development, and that this was a much-needed contribution in order to successfully stop the pipeline. Additionally, members of the coalition had discussed how the initial isolation that was seen in the beginning of the resistance, especially between landowners and environmental activists, had weakened the movement and that it was really important at this time to "stand for something, not just against something" so as to not alienate potential allies. One of the most important messages that came out of this meeting, according to this tribal member, was that "no one is going to allow this development to happen. No one."

C has been a part of the resistance since the pipeline was first proposed. She had worked for local environmental organizations in the area that were not affiliated with the pipeline

resistance initially due to insufficient funding, but who eventually became part of the alliance after she and others inspired them to take a deeper look at the threat this project had on both the environment and human communities within the region. Originally the proposed pipeline was not connected to the climate justice movement; however, once these activists learned about how the project would become the biggest greenhouse gas contributor in the state they knew they needed to actively work on stopping it.

C spoke about how when the Ruby Pipeline was being built, the one in which the Pacific Connector is to be attached to in Malin, Native American artifacts were unearthed and still lay across the surface of the landscape, prompting theft by personal collectors and black-market traders. She believed that Kinder Morgan, the corporation that owns and operates the Ruby Pipeline, was only interested in completing the pipeline and has shown little to no concern about tribal or community rights and safety since.

When others began to realize the enormity of this project and the impacts it would have on the bioregion, C and others began organizing community meetings. Initially it took some convincing to get the larger community involved as many of the other environmental activists she was connected to in the region were mostly focused on water issues at the time. One of the main obstacles she faced in getting their attention is that they were not receiving funding to fight pipelines; however, when it became apparent that the pipeline would cross under over 400 waterways these activists jumped on board. In December of 2014, C attended a meeting with landowners who would be impacted by eminent domain. It was at this meeting that she began to see the alliance between environmental groups, landowners, community members, and young people begin to form.

C approached Klamath tribal members in the region around 2014 who were also not initially involved in the campaign as they were working on other pressing issues regarding sovereignty, dam removal on the Klamath River, restoring traditional lands, and helping to create healthier environmental conditions to bring back salmon and other traditional foods. When the tribes became aware that the Pacific Connector Pipeline would be built in their traditional territory, however, they were infuriated at the prospect of another pipeline. She was told by one tribal member that Kinder Morgan misinformed the Klamath Tribes about the consequences the Ruby Pipeline would have, and although they did receive $9.8 million from Kinder Morgan in compensation for the Ruby Pipeline they were not prepared to have their sacred items unearthed, nor have their cultural resources ransacked by looters.

In September of 2016, the Klamath Tribes issued a statement to the State Historic Preservation Officer asserting that the Pacific Connector Pipeline posed a huge threat to their cultural resources and places of cultural importance, and that they believed "the risks presented by the Project clearly outweigh any benefits to the public" (Klamath Tribes Tribal Council 2016). As the pipeline would also cross under the Klamath River, the Tribes were very concerned about the impact this will have on the already impaired and severely compromised salmon runs, which is the main reason the outdated dams along the Klamath River are set to be removed by 2020 (American Rivers, n.d.). As C pointed out, "What's the point of removing four dams due to the extremely detrimental effects they have had on the health of the river and salmon if you are just going to go ahead and place a highly volatile gas pipeline underneath immediately after?"

Another point C made about the early days of the alliance is that initially there was no connections being made by southern Oregon activists and landowners with the California tribes

downriver along the Klamath, so they took it upon themselves to get involved. The northern California tribes began their campaign by hanging a banner across the river that said, “No Klamath Pipeline” and started having action meetings to strategize, write petitions, and collect signatures. C noticed by 2016 that there was a resurgence of tribal strength and unity between the Karuk, Hoopa Valley, and Yurok Tribes which she believes came about not only because of their collaboration to fight the Pacific Connector Pipeline, but also in response to the inspiration they and other tribes received from the opposition at Standing Rock in which hundreds of tribal members from northern California participated in. C said that it was actually at Standing Rock that tribal youth from northern California really got to know one another and form bonds. Others who stayed behind organized actions at Wells Fargo Bank, one of the main funders of the DAPL, in both Eureka and Arcata, California. Despite the unity they may have felt at Standing Rock, however, the California tribes struggled to figure out how to successfully address the pipeline in their own region. It was on Memorial Day of 2017 during the Salmon Run, a long-distance run and prayer organized to trace threatened salmon’s natural path up the Klamath and Trinity Rivers, that did it. C said that tribal leaders called it a “beautiful prayer which truly unified the Indian community in northern California and southern Oregon on the heels of Standing Rock”.

A Yurok Tribal member I will call L spoke about her and her tribe’s perspective on the proposed pipeline. L grew up on her ancestor’s traditional land in Humboldt County, California at the mouth of the Klamath River. Her tribe has been fighting for their traditional lands since colonial times, and in the last century or so she says they have been particularly focused on their water rights in the face of gold mining, deforestation, and other forms of resource extraction. She too noted that the No DAPL movement at Standing Rock had a tremendously positive impact on Indigenous peoples throughout North America and the world and said,

> The resistance took off like a bucket brigade, being passed onto one community after another. All of these pipelines represent a long history of colonization and genocide in America, but all Indigenous peoples were happy about the national attention the No DAPL movement received because now more people know what we have *all* been fighting against for the last 525 years, and more people are beginning to care about us. Finally.

The Yurok Tribe do not have a reservation. They were subjected to fee patent land and allotted separate plots. L's family has a home that was originally her grandfather's just outside of Eureka that her sister and her are now the caretakers of. Every year as a child, L would fish on the Klamath River with her father. This is how he earned a living and how her family subsisted. He would catch 20-30,000 salmon per year, and designated separate days for commercial and subsistence use. There were also special days reserved just for providing salmon to elders in their community.

Since 2012, there has been a steady decline in the salmon population, and 2015 was really the last true salmon season on the Klamath. In late winter or early spring of 2016, her family ate their last can of preserved salmon. There were not enough salmon in the river that summer, so they were not permitted to fish. "We are losing the health benefits of our traditional foods, and we are losing our culture as well", she said. L's great-grandfather was the last Yurok elder to perform their sacred salmon ceremony because "with no salmon, we are also losing our important cultural ceremonies." What she believes many people do not understand about Native American people is how closely their identity is tied to the land and their traditional foods. As she pointed out,

> First and foremost, I am a Yurok. The Klamath River flows through my veins like blood. We have lived on this river for time immemorial. We drank from it. Ate from it. Used it for transportation. Breathed it. It is who we are. Our fight to protect it goes back so much further than this pipeline. We have been fighting for this river since settler-colonial society moved here and took everything from us. We will not give up until this river is restored. Until it receives permanent protection. We are river people. Salmon people. We

> are not going anywhere. If this pipeline tries to come here, they better be ready for another Standing Rock

Like C, L also believes removing the dams on the Klamath River is extremely important for salmon and other wildlife, but "what is the point when they are just planning on putting a poisonous pipeline underneath our river?" Other research participants I interviewed expressed the same opinion. Moreover, those like C and L that expect a similar fight as seen at Standing Rock really hope it does not have to come to this. The Standing Rock Sioux and their allies experienced grave injustice and violence by the police. Northern California and southern Oregon communities do not want to see a repeat of that in the region. Instead, they hope the Federal Energy Regulatory Commission rejects the project so that people can go about their normal lives.

David West, a tribal elder and the former Director of the Native American Studies Program at Southern Oregon University, gave permission to use his name in this writing. David discussed his lifelong connection to the region, and although his ancestors were from the Ojibwe and Potawatomi Tribes near the Great Lakes, he grew up in southern Oregon and feels that the proposed pipeline would cause irreversible destruction to the environment, tribal lands, and all communities within the hazard zone. He spoke about Pembina's disconnection from the land and said, "the corporation has no spiritual umbilical cord tied to this beautiful piece of earth the way Indigenous peoples do". David is also a landowner who lives along the Rogue River, one of the largest rivers the pipeline would cross under, and has seen the health of the river coming back to life since the removal of dams in recent years. He too expressed anger and confusion over the duality of removing dams while preparing to destroy the river once again. David sees the destruction of the past still written across the landscape and stated,

> As it already stands, we can't drink most of the water in the area because of the copper and gold mining that happened long ago. The waters are still poisoned from that time period. Oregon has high levels of lead and arsenic in the waters. We already can't eat the

> fish because of arsenic and mercury – the state advised us not to eat it. You're not supposed to eat more than two fish per week out of the waters here for that reason. Supplying the lakes and such with fish stock is useless and a waste of money when the water is already poisoned. The fish look pale and sickly, and they want to put a pipeline here and make it even worse for us? It's criminal!

Like many others in the region, David believes the biggest risk the proposed pipeline and export terminal imposes is to the waterways, and this in turn presents the highest risk to Indigenous peoples because of their dependence on fish and other aquatic species. As far as the Jordan Cove Export Terminal, David finds it unimaginable to build such a facility in an earthquake and tsunami prone area. Next, he is very concerned about the degradation of land and the potential of a highly explosive pipeline put in an area increasingly overwhelmed by wildfires every summer. David also mentioned that as an Indigenous person he thinks that oil and gas act as stabilizers within the earth. He spoke about how his relatives believe it is a shock absorber and stated "it is supposed to be in the ground. Oil and gas are a living entity just like other parts of Mother Earth. It has a spirit. It is the lifeblood of our mother, and it holds up the foundation of our planet. To continue to exploit it will be cataclysmic".

A common opinion held by every person interviewed for this project was their distrust in the corporation as well as the government agencies involved. David's perspective was that the corporation promises their design is safe and that if anything were to occur as far as malfunctions or accidents are concerned, they will clean it up. However, David like many others believe these promises mean very little because the risks outweigh the benefits to the communities in the region. As he argued,

> We can't trust the government's promises anymore because none of their promises in the past were kept. They took our land, broke their treaties with us, killed us, starved us, and almost destroyed our cultures. As for the corporations, they already left their garbage

> everywhere when they came here to log, mine, dredge, and extract the lifeblood of this region. Their garbage is still here as far back as the 1850s.

As a native elder, David feels it is our duty as a species to be caretakers of the land rather than just takers. As he put it, "Our physique is useless. We have no claws. No sharp teeth. We were given our minds to create our cultures so that we would use our intelligence to be good stewards over Planet Earth. That's the Indigenous way, at least".

Other community members shared similar beliefs to David. J is a member of the Red Earth Descendants (RED), an Indigenous grassroots organization based out of Ashland, Oregon with a mission to "join youth, elders, families, and regional tribes together to share knowledge and skills". According to their website,

> RED follows the instructions given to us by our elders, including the knowledge of Indigenous prophesies. We have been told it is important to work together to create a sustainable land base. We strive to provide a place and a way to form true human beings. In order to do so, we must take care of ourselves and each other – mentally, physically, spiritually, and through community-building (RED, n.d.)

RED is also involved in the alliance to prevent the proposed pipeline from being developed, and members such as J can be seen at any number of events focused on the project. During the No DAPL movement at Standing Rock, RED was contacted by various individuals and organizations in the community who wanted to help. Like others throughout the country, Standing Rock inspired RED to take on more of an active environmental justice role in their work, and it prompted them to become more involved in the pipeline community members were fighting at home.

One important point J raised is she sees women as being an integral part of the fight on an international level when it comes to environmental degradation, and she sees the water protector movement as one that is led by women as it was a movement started by and maintained by women. As she put it,

> Women are like a forcefield for our sacred waters. We were put here on this Earth to protect our planet because a woman's body is like that of our collective mother. We are life givers, nurturers, warriors for our family and people. Women are like a storm when we work together. Before Standing Rock, there was not a lot of organized activism in the Indigenous community, nor was there much connection being made between tribes and other allies for the environment. Tribes stayed to themselves and worked on single issues that were impacting them personally. Everything has changed now. We have unity that hasn't been seen since the AIM Movement.

J argues that the biggest risk the Pacific Connector Pipeline presents comes down to the precedent it would set for other developers, and she worries about the cascading impacts of potentially more pipelines and other fossil fuel infrastructure coming to the area. As she sees it, "it would desecrate the region's waters, and impose on Indigenous lands and sovereign laws. I can't even imagine how catastrophic it would be for this delicate ecosystem. It would change the land forever."

One of the questions research participants were asked was how likely they think this development will go through. Most believed it would never happen due to the vast majority of local residents opposing it. J on the other hand believes there is a 50/50 chance it could happen, although the resistance movement gives her a lot of hope. Her greatest concern was the Trump Administration's "ruthless assault on the environment that has created a climate of condoning the massacre of our Earth." However, she also believes the No DAPL movement gave people a lot of strength to fight the government and the fossil fuel industry even though she is concerned about the level of violence they are willing to use on people, like what was seen at Standing Rock. J mentioned a native prophecy as an anecdote to the militarized violence at Standing Rock and the hopelessness many people are feeling in these times: "the prophecy states that when women come together, they will take the power back. When this happens the planet will shift, and we will begin to heal. I believe we are seeing that now. Women are unifying."

At an educational event in November 2017 at University of Oregon, an Indigenous guest speaker discussed how pipelines are a reminder of colonization and treaty violations. The EPA and FERC do not take into consideration how neocolonialism plays out in contemporary times, nor do they consider how Indigenous peoples continue to be dispossessed from their traditional territories. As far as these two agencies are concerned, as long as tribes are consulted, even if they oppose a pipeline development, that is their only legal obligation. When pipelines are constructed through traditional territories, as seen at Standing Rock and other places throughout the U.S., Indigenous communities are disregarded and ignored. Moreover, as she mentioned, the forced disconnection to land as a result of pipelines and other fossil fuel infrastructure coincides with a lack of viable places to harvest traditional foods. As this speaker pointed out, "this then leads to not only cultural and social fragmentation, but myriad of health problems including diabetes and obesity which is an epidemic in many Indigenous communities". The State repeatedly fails to consider the needs and rights of Native Americans while also dismissing the other issues plaguing their communities including poverty, violence, and the impacts of climate change. Despite these challenges, however, Indigenous leaders have emerged as frontrunners in the environmental justice and anti-pipeline movements. This was apparent at Standing Rock and is apparent in the resistance to stop the Pacific Connector Pipeline, as I witnessed in Salem at the Oregon State Capitol rally against the pipeline in January of 2018 where a large contingent of Indigenous youth and elders were present and were leaders at this event.

Others who are involved in the environmental and climate justice movements in southern Oregon recognize that it is Indigenous communities that will be the most impacted if the Pacific Connector Pipeline is built, even though some argue that it is the landowners who have received the most attention in the media. This is not to say that they do not believe a grave injustice will

be committed against the over 600 private landowners who will be subjected to eminent domain, rather that the voices of Indigenous peoples have been historically overlooked and continues to be by the fossil fuel industry as well as the U.S. Government.

A member of an organization who is one of the leading voices against the Pacific Connector pointed out how when her organization started their campaign to stop the pipeline, there were not a lot of young people involved. That has changed in the last couple of years, and she attributes that to the No DAPL movement. “Standing Rock put pipeline resistance on everyone’s radar, including non-Indigenous environmental activists”, she said. The intersectionality of the Pacific Connector and Jordan Cove resistance alliance is notable, she said, as

> it is made up of Indigenous peoples, environmentalists, lawyers, landowners, ranchers, farmers, fishermen, People of Color, hippies, wildland firefighters, scholars, human rights activists, and other concerned community members. This diversity makes us very strong as well as hopeful that we can stop this development.

This intersectional bridge that brings together such a diverse resistance movement is believed by many to be the campaign’s greatest advantage, and some research participants noted that when different communities finally banded as one united force to stop the pipeline rather than fighting it on an individual basis or only with those they shared commonalities with, everyone felt stronger and more equipped to take a stand. Intersectionality is the backbone of environmental justice movements in the U.S. and elsewhere because environmental degradation, poverty, racism, sexism, and all other forms of oppression are intricately connected, and vulnerable communities often face multiple injustices at once (Bodley 2012).

A member from another environmental organization that was one of the first groups to organize against the pipeline in early 2009 discussed the exhaustive nature of this fight including the confusion of the development turning from an import to export facility, how often the

industry has changed their plans on the pipeline route, and how FERC already rejected the permits twice. “Honestly, I thought it was over in 2016 after FERC rejected their permits for the second time. By that time, we were totally burned out as it was our biggest campaign for over 7 years.” She too spoke about how the strong alliance and resistance gives her a lot of hope, as does the spirit of the people all around over the Pacific Northwest. “People here take great pride in the wilderness and our clean rivers and other waterways. Because of the connection so many people have with the land, even the average person is going to make it extremely difficult for Pembina to succeed.” She mentioned how she spoke to many union workers that would be hired for this project who would just as happily work in the sustainable energy field if given the opportunity. “It’s not like they know the impacts LNG has on the planet, and they have no loyalty to it. If they were promised jobs in solar or wind or some other sector, they would be just as eager. They need work. A good paying job close to home. That’s it.”

At an Oregon Department of Environmental Quality (DEQ) public event in November 2017, hundreds of people from the alliance showed up to voice their concerns about the pipeline. Environmental lawyers spoke up on behalf of Oregon’s clean waters and healthy ecosystems, as well as the injustice thousands of Oregonians will be subjected to. One young activist encouraged the DEQ to not allow the development to go through stating, “it is our right as young people to be able to breathe clean air and drink clean water. We deserve to have a future!” A fisherman from Coos Bay spoke and was extremely concerned about the 7-mile-long dredge the Jordan Cove Energy Project would dig in the Coos Bay estuary to make room for the large vessels that would be coming in and out of the harbor. He noted that not only will these large vessels interfere with traffic space for local fishermen and potentially pollute the water and fish he and others depend on, but the possibility of a large subduction zone earthquake and tsunami

near the facility worried him even more. He thought it was "preposterous to even consider putting an LNG refinery and export terminal in the area".

A woman present likened the denial of climate change to the denial of sexual abuse, "and the longer we continue to deny the impacts of climate change the more this abuse will continue." Another woman from Coos Bay spoke to the Commission and stated, "even considering this project after the fire season Oregon had this year, coupled with the inevitable subduction zone earthquake that *will* happen on the coast, is psychotic. All pipelines leak; it's only a matter of time. But let me make my main point: clean water and air are a human right, and it is your job to protect everyone in this state!" A woman called in by phone and asked the Commission why this project would be exempt from the clean carbon rule in Oregon. When the Commission could not provide a satisfactory response to her question she stated, "Pembina would be exempt because the gas would come from somewhere else outside of Oregon. This allows Pembina to increase their profits by exporting through the West Coast rather than through the Gulf Coast. But who pays the price? We will. We will soak up their pollution." Another resident from Coos Bay stated her concerns about wildfire. She has lived on the coast for 43 years and has never seen the rivers so low and the wildfires as bad as they were in the summer of 2017. She too thought it was "insane to put a refinery and export terminal in an area we are constantly reminded of as being on the verge of a massive earthquake. It's the making of a napalm fire." One Coos Bay resident and cattle rancher I spoke with not only voiced his concern about the environmental impacts the export terminal could cause, but expressed his anger and frustration about how the industry has made all sorts of promises to the local community about the economic benefits the development will bring. "They think we're stupid. They talk to us like we are uneducated and worthless. This terminal will create very few jobs and will not benefit the vast majority of us. Why not invest in

sustainable energy like solar or wind? That would help all of us. That will grow our economy." Several people who attended the DEQ event noted examples of how many pipeline accidents have happened in recent years across America, and expressed deep concern about their homes in the event of a catastrophe. As the last speaker of the day stated, "No matter how many jobs it creates, it will never be in the best interest of Oregonians. It's a breach in the Clean Energy Act, a breach in human rights, and it's a Canadian company doing business with overseas markets. That's just wrong!" It was clear that all those present were looking to the DEQ and the State of Oregon to protect them and their communities.

At another public event put on by 350.org in Eugene, concerned community members voiced their opinions about the future of this project and how they could continue to strengthen the alliance. One older woman stated that she was not only troubled by the environmental and social risks of the pipeline and terminal, but she also believed this development posed a security risk for terrorist attacks. Several others agreed. Another point that many who were present repeated was that they wanted to put more pressure on Governor Brown because she could ultimately direct the Attorney General to not allow the project to go through. Senator Merkley came out late in 2017 opposing the project; however, as of summer 2018 Governor Brown has yet to make a statement. Many in attendance expressed anger and disbelief about the governor not shutting down the project all together without even considering the permitting phase. They also felt that they had been lied to by the industry as the numbers of promised jobs have increased since the initial application, as did the dollar amount in revenues promised to the counties. Although the mood was lively at this event, many people in attendance expressed fear that FERC was going to "rubber-stamp" Pembina's new permit applications due to the pressure put on them by the Trump Administration. One of the main points discussed at the event was the

fire season of 2017, and how great the risks would be to local residents in the event a wildfire happened anywhere near the pipeline or terminal.

I happen to interview a local wildlands firefighter who lives and works in southern Oregon, and he had numerous concerns about this project. As a longtime environmental activist, he felt that by continuing to build fossil fuel infrastructure at a time when we are well aware of the climate crisis is ludicrous and that the impacts on the environment, waterways, traditional territories, and private land was unconstitutional. As a firefighter who has seen the severity of wildfires increase exponentially in recent years in the region he stated,

> If a wildfire broke out along the pipeline route or near the export terminal, there would obviously be concern for ignition of natural gas which could lead to a catastrophic situation. Even with a buried line it could become an issue, and there would not be any firefighters near the line in case of an explosion. The heat and flames of a wildfire could damage the pipeline itself…I assume most dedicated and professional firefighters from the structure and wildland sector would be very concerned about this pipeline.

When asked what he thought about the resistance campaign, and whether he thinks this project will go through he noted,

> You do have to understand that the corporate fossil fuel companies are very powerful, if not *the* most powerful. To stop this 'machine' can be daunting at best. Fossil fuel companies rule the world in many ways, and in many cases they are more powerful than governments themselves. It seems, however, that the Pacific Northwest has quite the resistance movement, and I am hopeful that this can be stopped if enough people stand up to the corporation.

He also felt that for the over 600 landowners in the region who would face eminent domain proceedings, lose a portion of their property while also devaluing its worth, and be subjected to potentially catastrophic risks in the event of an accident this project no doubt feels like a human rights violation.

One landowner I spoke with who purchased her property with others in the 1970s as a land trust for conservation purposes has been involved in the campaign to stop the pipeline since

the project was first proposed. The corporation approached her and her land mates in 2005 and asked to purchase 8 acres of their 147-acre property for the purpose of putting the pipeline through it. For these 8 acres, "the corporation offered a measly $2200". When the project was changed from import to export, an alternative route of the pipeline was proposed that would not be on the land trust's property but would come close to their living structures. However, last fall they received yet another letter from the corporation that stated they redirected the route once again and this new route would once again be on the land trust's property.

When FERC denied the permits to the Pacific Connector Gas Pipeline in March of 2016 on the grounds that the risks to the public outweighed any benefit communities in Oregon would gain, the corporation changed their original offer to the land trust nearly 10-fold, offering $20,000 for the 8 acres "to show FERC that this project was indeed in the public's best interest." In talking to this landowner, I learned that Pembina has made a dubious enemy with another extractive company, Seneca Jones Timber Company of Douglas and Lane Counties. Seneca is upset because they have been repeatedly denied permits to log a parcel of land in the region due to the risk and probability of wildfires, yet this same parcel would be legally acquired by Pembina to construct a pipeline carrying copious amounts of highly volatile gas each day. Even though at the time of this writing Seneca Jones has yet to jump on board the anti-pipeline campaign trail, the fact that they too would be impacted by this development and are raising their voices about it points back in a certain sense to the intersectionality of the campaign, and the "unlikely allies" it has brought together to fight a common cause.

According to this landowner, one very positive thing to come out of the alliance is how it brought people together who in the past may have been at odds including ranchers, environmentalists, landowners, and even loggers. "It's not only inspiring to see people work

together this way to stop the pipeline", she said "but we are creating a community like we never had before and helping each other on other projects, having dinner together, and creating a feeling of family."

One of the issues that concerned this landowner the most was that she did not feel enough precautions were taken when designing the pipeline through a wildfire prone area. She said,

> The entire design is flawed. There are 17 places along the current proposed route where the pipeline would be above ground. Seriously? Just look at how the new norm of wildfires are raging in the west, including here in Oregon, and you would understand how absolutely insane this idea is. We should also ask, would burying it protect the pipeline? What the Army Corps of Engineers told us at a public meeting is that the ground acted as a buffer. Really? In some places the line would only be required to be buried 18 inches. Is that enough protection? Is the 36-inch maximum depth enough protection? I'm no engineer, but I seriously doubt that's safe in a region where wildfires are so prevalent.

These sentiments and concerns were shared by many other landowners I spoke with. S is not only a landowner in Douglas County, he runs a nonprofit that works to address the environmental concerns in the region and is involved with a local watershed council. S mentioned that many other landowners and community members were neutral about the project when it was first proposed as an import terminal. When plans changed in 2012 to be an export terminal instead, the corporation's credibility plummeted and citizens in the community became outraged. S believes as the public became more educated about the potential impacts and hazards, they immediately knew how dangerous this project would be to their communities. "Education is key here", he said. "The more people know and understand, the likelihood of them supporting this project goes down to zero. The campaign did a good job spreading the word. In that, we already won. People know now how terrible this project is. They didn't before."

Douglas County houses one of the largest timber industries in the world, but unlike Seneca Timber who are at odds with Pembina many of the other timber companies in the region support the pipeline. S believes this is because they will get the timber from the 229-mile-long

and 90-foot-wide clearcut that Pembina would need to cut along the pipeline routs for safely purposes, and "they would get all the profits from that – an enormous amount of timber." Like every other person I interviewed for this study, the main concern for S was the waterways. He felt that southern Oregon's rivers were already compromised due to the mismanagement practices of logging, the impacts of dams, and the fact that "waterways are still inundated with pollution from mining practices in the past". Moreover, S was very concerned about how climate change is affecting the rivers and streams in southern Oregon and believed that a Canadian corporation could not possibly understand the challenges that residents here already face. "To put a pipeline through our region - a region on the verge of catastrophe as it is with wildfire threats, historical lows of salmon, and every other environmental problem we already have here - is a preposterous concept. We need to heal this land, not take more from it."

Susan Brown from the Western Environmental Law Center, who granted permission to use her name in this study, shared these same concerns and has been the main attorney fighting the pipeline over the past decade. Susan pointed out that when the project was proposed as an import facility, Veresen actually sued the State of Oregon over its clean water laws because they could not get the permits they were seeking. Landowners refused to give Veresen permission to cross waterways on their property, "so in its ruthless attempt to get these permits, they went straight to litigation". In the beginning of the campaign, Susan was mainly a source of legal information for the public and put landowners in touch with other lawyers who specialized in eminent domain proceedings. In the early days, it was mainly landowners and environmentalists who were active in the movement; however, over time the tribes became more involved as well. She said,

> When the tribes got involved, that's when we started to build real solidarity. The power of our opposition to this project increased exponentially because tribes have

> more strength and political influence due to sovereign rights than the rest of us do combined. The impact this project will have on traditional territories is enormous. We're talking sacred sites including burial grounds, traditional food sources like salmon. The list goes on. However, the level of outrage by many Oregonians for the tribes is refreshing. Tribes never get a fair share, and their rights are not equitable in any sense. If this project goes through, they stand to get completely cheated by the federal government once again.

Just as environmental justice movements bring together people from diverse backgrounds who experience oppressive subjugation, settler colonialism can as well. Federally recognized Native American tribes are protected under the Constitution, and have treaty rights the U.S. Government is legally obliged to follow. This is not always the case, as seen at Standing Rock as well as with other Indigenous communities who are fighting the fossil fuel industry's contemporary expansion. However, the No DAPL movement brought out many non-Indigenous allies that came to stand in solidarity with the tribe to help protect the water as well as their cultural and sovereign rights. The intersectionality seen in the campaign to stop the Pacific Connector Pipeline also highlighted this fact. Everyone I spoke with regarding the pipeline expressed deep concern for the tribes in the region who have already lost so much. They also believed there was much still left to lose, and that is why they have decided to act with such vigilance to stop this pipeline before the risks they perceive as inevitable happen.

For property owners in the region, much is also at stake. Susan talked about how rural southern Oregon landowners struggle economically to begin with, and that "it is all too common for pipelines to run through poor country folk lands where many people may not know their rights or have adequate legal representation." Once FERC decides to issue the permits for the pipeline and export terminal, Susan thinks eminent domain proceedings will move forward extremely quickly and landowners will have a real fight on their hands. As she put it,

> an important thing to consider is that eminent domain is often justified for such projects like highways and hospitals, but in this case people will have their land robbed from

> them for a foreign corporation so the fracked gas can be shipped overseas. There is nothing here that represents 'in the best interest of the American public' which is what eminent domain is supposed to be about. This is criminal.

Like others interviewed in this study, Susan believes it is because of the diversity and solidarity within the movement that there is a real possibility to defeat the development. She said "it is due to the variety of voices that we have strength. Stronger together, right?" Moreover, she pointed to the combination of environmental, cultural, and social risks of this project which has brought people from all backgrounds together. As previously mentioned, and as Susan described, "these risks include impacts on the climate, waterways, traditional and local food sources, the very real threats of wildfire and a subduction zone earthquake, sovereignty rights, eminent domain, and many other concerns." As someone who has been legally fighting this project for a decade, she has seen what she and many others referred to as the "zombie pipeline" (because it was denied and risen again three times now) not gain enough support by the public to be built. I asked her if she thought the Trump Administration might change that considering their position on 'energy independence' and she said, "there is still no way it's going to happen."

> There is still no way it's going to happen. FERC will not grant the permits. There is too much political pressure from the coalition. And even though Governor Brown has yet to make a statement, probably because she is concerned the State of Oregon will be sued again, Senator Merkley is very outspoken about his opposition now, as are other politicians within the state. The judicial review will have to survive myriad potential impacts which we have documentation of. There is no infrastructure here. It would have to be built from scratch. Even just the number of roads that would have to be built to construct the pipeline; that's a ridiculous amount of effort. The enormous clearcut? Come on. This is never going to happen. Oregonians love the environment too much to ever allow this type of destruction. I have to believe that with all the opposition coming from every corner of the state, and by people from all walks of life, this project will be defeated.

Section 3.5: Conclusion

Environmental justice movements seek to not only expose the environmental and socioeconomic disparities vulnerable communities face, but it also insists on an equitable distribution of resources and the right to live, work, and play in healthy and safe conditions. Marginalized communities have always bore the burden of unjust government policies, avaricious and dangerous practices of extractive industries and corporations, and the overall wealth and privilege of those who yield more power. Race, class, religious affiliation, gender, and other factors often determines the level of risk and uncertainty one is forced to live with when it comes to fossil fuel development and other forms of environmental degradation. This was apparent for the water protectors at Standing Rock as it is for the Indigenous peoples and economically marginalized communities in the case of the Pacific Connector Gas Pipeline.

Settler colonialism *is* environmental injustice. For over 525 years Indigenous peoples have been dispossessed of their lands, robbed of their resources, and subjected to genocide, violence, and inhumane treatment. The contemporary practices of the fossil fuel industry seen across North America highlights the level of environmental racism Indigenous peoples endure. However, the No DAPL movement exposed these unjust and violently constructed practices of both the U.S. Government and the fossil fuel industry and brought awareness to millions of people throughout the world that are concerned about our collective future and the wellbeing of our planet. In the end, the Dakota Access Pipeline may have been built; however, in the long run the Standing Rock Sioux and their allies brought this issue to the world stage and inspired wave after wave of resistance movements seeking to protect the water and the land they depend on.

The No LNG movement in southern Oregon and northern California is one such resistance movement, as research participants continually pointed to Standing Rock as their

source of inspiration. Additionally, almost everyone interviewed in this study recognized the importance of intersectional resistance and community solidarity when it comes to stopping the Pacific Connector Pipeline. Indigenous peoples in the Pacific Connector hazard zone already face other challenges such as dispossession of ancestral lands and loss of traditional foods, and many live far below the poverty level. Even considering placing a pipeline through a region inundated with socioeconomic challenges, as well as wildfires and drought, is an incomprehensible idea to the tribes and other community members of this bioregion. Research participants expressed their hope that they could avoid another Standing Rock and the type of state-sponsored violence that occurred there. However, many were optimistic that the resistance campaign is strong enough that the development will never go through.

The proposed pipeline and export terminal were denied permits twice in 2016, therefore the industry is obligated to issue a new Environmental Impact Statement before the project will be considered again. At the time of this writing the revised EIS has not yet been published, although it is expected to come out in early 2019. If and when the Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal are built remains to be seen. What is apparent, however, is the strength and determination of area residents who are committed to protecting their tribal territories, their private property, their communities, the environment they depend on, and future generations.

Chapter Four: Cultural Keystone Species Conservation and Human Rights

Section 4.1: Introduction

This chapter explores the connection between human rights and environmental conservation and is a part of a larger body of work funded by Oregon State University's National Science Foundation Research Traineeship (NRT) Program in which I was a fellow of during the 2017/2018 school year. Below is the anthropological contribution to a research report which explored why cultural keystone species should be incorporated into federal conservation policies as these species are both culturally important as well as essential for the quality of life for Indigenous and traditional communities throughout the United States and elsewhere. I argue that only when conservation strategies include vulnerable communities and their access to species that have sustained their communities for generations will any real solution to environmental restoration and protection be achieved. By looking at biodiversity conservation through the lens of Indigenous rights, this chapter provides an overview of the cultural keystone species complex and offers suggestions on how we might go about expanding current policies, or create new ones, that help protect both biodiversity and cultural diversity.

Section 4.2: Traditional Ecological Knowledge

Traditional lands are repositories of Indigenous peoples' history, culture, and ancestral knowledge dating back from time immemorial to the present day. Written in the geographical features of a landscape is the very identity of a people who share a deep connection to place and the many species that live there. This link between culture and ecology is often referred to as Traditional Ecological Knowledge (TEK), and although there are many definitions of TEK due to the diversity of cultural groups and the biophysical diversity found throughout the world Berkes (2018) broadly defines TEK as the "cumulative body of knowledge, practice, and belief,

evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (8). TEK is a dynamic, culturally unique, and habitat-specific set of knowledge that includes an intimate and detailed understanding of the animals, plants, and natural phenomena of the land while also involving a multitude of practices and technologies a cultural group has used to adapt to an area over time and sustainably manage their natural resources.

The study of TEK begins with the empirical knowledge of identifying and classifying species, while also connecting science and culture to assist people in understanding ecological processes as well as their personal and collective relationship and responsibility to the environment (Berkes 2018, Houde 2007, Tan and Gavin 2016). TEK includes both practice, or the way a people exercise their livelihood, as well as the beliefs, values, and environmental ethics they share. Although Indigenous and traditional peoples have applied, transmitted, preserved, and protected TEK for generations, scientists and agency representatives throughout North America and elsewhere only formally began to recognize TEK in the 1990s (Dudgeon and Berken 2006). However, non-Indigenous scientists and other experts are increasingly looking to TEK, particularly in resource management areas, to help solve the complex environmental problems of our times. As Menzies (2006) points out, "TEK is held as a beacon of hope [and] is being put forward as the solution to a myriad of problems created by industrial resource extraction and intensive factory-style agriculture" (88).

It is important to keep in mind that there are both similarities and differences between Western science and traditional science; however, understanding the common ground between them could help preserve and protect the environment and natural resources, change policies, strengthen communities that are often marginalized, and lead to restorative justice for Indigenous

and traditional peoples who are often impacted the greatest by environmental degradation and climate change. The following diagram compares and contrasts TEK and science, while also pointing out the commonalities they share.

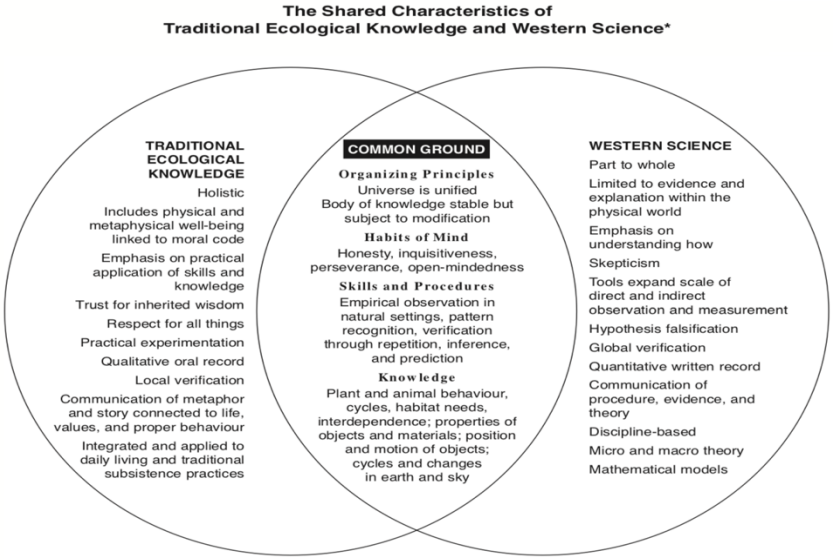

Figure 4 - From the Handbook for Culturally Responsive Science Curriculum, Sidney Stephens 2000

Section 4.3: Cultural Keystone Species

Cultural keystone species (CKS) play a significant role in the lives and livelihoods of many Indigenous groups and their connection to TEK and are defined as animals and plants that are critical to the well-being and security of a community due to the cultural, social, psychological, spiritual, and symbolic benefits they provide (Cristancho and Vinning 2004). While keystone species are "species whose impact on its community or ecosystem is large, and disproportionately large relative to its abundance" (Power et al. 1996, 609), cultural keystone species form the contextual foundations of cultural groups and play fundamental roles in meeting the nutritional, medicinal, religious, and material needs of a people. These species often figure prominently in a culture's vocabulary, language, and oral histories and narratives, as well as in their spiritual and ceremonial practices (Garibaldi and Turner 2004). Just as keystone species are

essential to the function of a particular ecosystem and are not temporally or spatially universal, so too are cultural keystone species; what might be a cultural keystone species to one community may not be one for another even in close proximity to one another. Moreover, as culture is not a static phenomenon, people's dependence on different species evolve as their cultural practices and needs evolve.

The foremost principle that distinguishes a cultural keystone species is the central role it plays in defining the cultural identity of a group; however, there is much debate over how to properly classify and characterize a cultural keystone species. Garibaldi, an ethnobotanist, and Turner, an ethnobiologist, first introduced the concept of cultural keystone species in 2004 and created a quantitative index in order to evaluate a species' influence within a culture. They measure six typologies for a species to be considered a cultural keystone including:

- Intensity, type, and multiplicity of use
- Naming and terminology in a language, including the use as seasonal or phenological indicators
- Role in narratives, ceremonies, or symbolism
- Persistence and memory of use in relationship to cultural change
- Level of unique position in culture, e.g. it is difficult to replace with other available native species
- Extent to which it provides opportunities for resource acquisition from beyond the territory

Cristancho and Vining (2004) expand on the CKS framework noting that:

> The CKS concept has special relevance as a parameter of evaluation within the Cultural Impact Assessment framework since the United Nations Environmental Programme has emphasized the strong connection between ecological and cultural preservation in the context of [I]ndigenous communities" (153)

Attributes that Cristancho and Vining deem important for a species to be considered a cultural keystone include: the perceived, empirical, and understood ecological and cultural centrality of a species to a people; use, presence, and abundance of a species in the lives of a cultural group; function of a species in the psychological, social, and cultural structure of a group; existence and

interaction with other species; psychoactive importance, and the crucial role a species plays in a group's traditional, religious, and sacred knowledge of place (153-158). Cristancho and Viming argue that for a species to be a cultural keystone it must meet most of the following seven indicator conditions:

- The story of the species' origin is tied to the myths, the ancestors, or the origin of a culture
- The species is central to the transmission of cultural knowledge
- The species is indispensable to the major rituals on which a community's stability depends
- The species is either related to or used in activities intended to supply the basic needs of a community such as getting food, constructing shelters, curing illnesses, etc
- The species has significant spiritual or religious value for the culture in which it is embedded
- The species exists physically within the territory that the cultural group inhabits or to which it has access
- The cultural group refers to the species as one of the most important species

Platten and Henfrey (2009) take the concept of cultural keystone species one step further and consider a broader definition. They argue that rather than centering only on a particular species, cultural keystone is in fact a complex which includes both material and non-material components of a larger whole by combining "biological species, knowledge, and technical practices" (493). Therefore, the cultural keystone concept, Platten and Henfrey assert, should examine the fundamental roles a species plays within both ecosystems *and* social systems, while also attempting to understand the interconnectedness between material and culturally-distinctive subjective factors. By looking at the complex "in terms of its structural and organizational role within such cultural or culture-bearing systems", Platten and Henfrey propose their own set of cultural keystone attributes. These include a complex made up of such feature as:

- Traditional Ecological Knowledge
- Effects on Social Relationships
- Subsistence Strategies
- Economic Security
- Social and Political Organization and Formation
- Seasonal and Daily Labor Schedules
- Perception of Identity and Wellbeing

- Gender and Age-Specific Roles
- Ties to Interpersonal Bonds
- Systems of Land Tenure
- Cultural Adaptation to Ecological Setting
- Ecosystem Services
- Resource Conservation Strategies

The cultural keystone concept can best be examined in much the same way an ecological keystone is understood. Although Garibaldi and Turner (2004) define CKS as a "metaphorical parallel with ecological keystone species" (2), Platten and Henfrey (2009) argue that cultural keystones are not parallel at all but are in fact directly connected with the ecological keystone term. Just as ecological keystones are crucial to the maintenance of ecosystems due to their contribution of energy flow and structural support of other organisms (Power et al. 1996), cultural keystones are often intrinsic to the cultural survival of Indigenous and traditional peoples. As Platten and Henfrey point out:

> Social-ecological systems incorporate several different levels of structural complexity. Cultural keystones are system elements with non-redundant functions crucial to the maintenance of social-ecological systems at any analytically identified level of complexity…The keystone is not the species itself but a complex of activities, knowledge and cultural norms based around its production or use.

The authors note that dependence on cultural keystone species should be looked at functionally rather than through operational terms, and show how cultural keystones impact myriad of cultural attributes including population density; economic security; agricultural practices; social dynamics; collective labor; regional networking, and commercial exchange.

If a keystone species is removed from an ecosystem, this would lead to cascading effects that may result in irreparable damage to the entire ecosystem (Franco et al. 2014). If a cultural keystone species is removed from a human community, this too could lead to adverse impacts that dramatically change or even endanger an entire cultural group (Lepofsky et al. 2017). Cultural keystone species form the contextual foundation of a population, and due to their

significance in that they may have sustained a people for generations, the impacts they have are deeply rooted within the embodiment of their social, cultural, political, and spiritual identity.

Garibaldi and Turner (2004) point out that "all around the globe, humans identify themselves and each other by their cultural and economic affiliations with particular species of plants and animals" (2). Because a people's livelihood and cultural identity are profoundly intertwined with the landscape, the loss of a cultural keystone species could disrupt the entire cultural keystone complex (Platten and Henfrey 2009). For example, salmon was and still is one of, if not *the* most important cultural keystone species for many Indigenous communities throughout the Pacific Northwest, and tribes have depended on salmon since time immemorial to meet their nutritional, religious, and cultural needs. The Columbia River Inter-Tribal Fish Commission (2018) point out several reasons why salmon are so integral to Indigenous cultural stability and assert that "without salmon returning to our rivers and streams, we would cease to be Indian people". Some of the reasons salmon are so important to their communities include:

- Salmon are a part of their spiritual and cultural identity
- Salmon are used in religious ceremonies such as the First Salmon Ceremony, among others
- The return of the salmon each year assures the continuation of all life
- Salmon have been and continues to be an essential economic resource and a preferred livelihood
- Salmon habitat are a part of a "sense of place" and tie tribes to the land as stewards
- Are indicator species, and the health of salmon populations are directly connected to the health of the entire food web, including humans
- Have been a primary food source for generations, and are an essential component of nutritional health
- As tribal populations grow and return to pre-colonization levels, salmon and other wild foods are even more important for cultural stability
- Traditional values and TEK are passed onto younger generations during the annual salmon harvest, ensuring intergenerational connections and cultural continuity (CRITFC 2018).

As important as salmon is to numerous Indigenous communities throughout the Pacific Northwest, anthropogenic disturbances such as overfishing, hydroelectric dams, commercial

agriculture, industrialization, resource extraction, pollution, and climate change have drastically reduced their populations leaving many Indigenous communities in cultural, social, and economic turmoil (Montgomery 2003). Moreover, at least 137 species rely on the marine-rich nutrients that salmon adds to ecosystems, making them an essential contributor to both environmental and cultural stability in the region (Rahr 2018).

Both oral tradition and the archaeological record indicate that Indigenous peoples in the Pacific Northwest have been dependent on salmon for at least the last ten thousand years (Reedy-Maschner 2012). Due to the aforementioned anthropogenic disturbances, however, populations of this important cultural keystone species are a fraction of what they once were. According to Meengs and Lackey (2005), Indigenous harvest of salmon prior to white settlement in the Pacific Northwest was estimated to be approximately 10 million pounds, or over 5 million salmon annually. Since then salmon populations have steadily declined, dropping to as low as 3-6% of their original populations (Montgomery 2003). The ramifications of the disappearance of such a significant cultural keystone species for Indigenous communities is widespread and has led to malnutrition, economic uncertainty, and the loss of traditional ceremonies and lifeways (Menzies 2012).

Salmon require cold, clean, and oxygenated waters to survive, and are dependent on the unique and ideal environmental conditions of the Pacific Northwest. Moreover, the entire environment is dependent on salmon, as they are an essential species in the complex food web of the entire region. As Molinero (n.d.) points out,

> The land relies on the salmon to bring marine nutrients inland, the key element to keep the food cycle going at all the trophic levels. Without salmon, not only the lives of bears, ospreys, bald eagles, martens, wolverines, frogs, salamanders, and even deer and other herbivores would be vastly different if not impossible, but also the livelihood of trees, the productivity of the forest floor, and the insects that are at the base of the food chain would be imperiled without the energetic input of salmon (4).

Simply put, the Pacific Northwest, and its peoples, would not be what it is without salmon. The symbiotic relationship between Indigenous peoples and salmon that evolved over thousands of years points not only to the sustainable management practices of the tribes that protected this essential cultural keystone species for millennia, but should also direct our collective action to repair salmon habitat as both an act of restorative justice for Indigenous communities, and the numerous species and ecosystems that depend on salmon for their survival.

Section 4.4: Cultural Keystone Species Conservation

Exploring the meaning, significance, potential, and limitations of the cultural keystone species concept is a worthy project in the face of the global environmental challenges of the modern era. As every society since the dawn of humanity has relied on specific species to fulfill fundamental roles in their physical and cultural subsistence, understanding our dependency on them can help better prepare humanity for our own collective survival as a species. Identifying the significance of cultural keystone species and how they contribute to the stability of a cultural group is the first step. Garbaldi and Turner (2004) argue that it is important to first consider the three issues of scale when analyzing cultural keystones to fully grasp their importance.

First, cultural keystones vary depending on a temporal scale. As the authors note, "[b]oth seasonal markers, such as phenological cues, and longer-term historical markers, such as ceremonies or other rituals that strengthen cultural cohesiveness, facilitate the cultural continuity of landscape use and management" (6). Throughout the Pacific Northwest, the return of salmon was and continues to be a culturally significant event in which many tribes hold ceremonies to celebrate. As Montgomery (2003) discusses, "the first fish caught was honored as the First Salmon and either was shared among community members or was ritually eaten by a shaman" (45). The bones of the First Salmon are then returned to the water and are often buried in the

riverbed to show respect for the salmon. These seasonal and annual ceremonies, as Garibaldi and Turner point out, help "people renew their cultural identity on a short-term seasonal scale and on a longer time scale spanning multiple generations" as traditional knowledge is passed down.

Second, cultural keystones vary on a spatial scale. What is considered to be a cultural keystone to one group may not in fact be one for another group, even those residing in close proximity to one another. Garibaldi and Turner explain this further, pointing out that many factors determine a CKS, and that "availability of resources, plant community structure, and proximity to other cultural keystone species all affect the significance a community places on a particular organism" (7). One important issue the authors address is that cultural keystones are not bound by traditional territory either, and "may be viewed on joint temporal and geographic scales" (8), as is the case with seasonal runs of salmon, or specific plants located in different locations at different times of the year.

Lastly, Garibaldi and Turner explain how cultural keystone species vary on a social scale and may be determined by an individual's social standing within a cultural group, such as for elders or other tribal leaders. The significance of a cultural keystone could also vary from individual to individual and be dependent on a person's personal connection to a species. The authors argue that even those species that may be considered "small-scale" keystone species due to their importance on an individual rather than group scale should "not undermine the importance of such species in maintaining and reflecting wellbeing and identity within that context" (7). Since elders and other tribal leaders play an important role in the cohesion of a cultural group, protecting CKS that are important to them in turn helps protect the entire cultural complex.

These spatial, temporal, and social scales are not seen as separate; they operate on a continuum. An important final point the authors make when discussing these scales is that applying the CKS framework to Western societies may prove to be too challenging as multiple cultural groups often converge with one another. They argue that the CKS framework works best when applying it to Indigenous and traditional communities who have existed in a specific location for generations, and who have a long-term connection with their environment and the species that make up an ecosystem.

Section 4.5: Potential of CKS Model

We live in a time when global environmental degradation threatens the existence of not only biodiversity, but cultural diversity as well. Human society has had a quantifiable impact on the natural world since at least the Age of Exploration, and particularly so since the Industrial Revolution. Every year thousands of plant and animal species go extinct, fragile ecosystems collapse, and disruption in normal weather patterns cause resource wars, degradation of coastal territories and traditional lands, and immeasurable human suffering (Bodley 2012). Loss of important species that have sustained human communities for generations as a result of ecological destruction and climate change will no doubt add to the challenges Indigenous communities and others face as access to land and resources becomes less certain. The potential the CKS model has in both conservation and restoration research, however, is promising. Even in the midst of the environmental challenges we collectively face as one global community much can be done both to preserve what is left, and to reclaim and restore what has already been damaged. As Garibaldi (2009) points out, “restoration can support ecological parameters such as system function, stability, and integrity, while simultaneously renewing and supporting the cultural beliefs and practices that are integrated with the landscape and species being restored”

(328). By recognizing that humans are not separate from nature but are in fact a part of it, the potential to right the wrongs of past mismanagement practices is key to not only our own survival but to the survival of biodiversity, human diversity, and the planet as a whole.

Section 4.6: Social and Cultural Risk Assessment: Where Would Protecting CKS Fit?

The Civil Rights Movement inspired a new generation of people from diverse backgrounds to fight for equal rights and cultural freedoms. Although Indigenous peoples have always played an empowered and active role in liberating their communities from racial injustice, the Pan-Indian and Red Power movements of the late 1960s became an important catalyst for social change in the United States. These movements helped to expose the pervasive exploitation, mistreatment, and lack of legal protection Native Americans had endured since colonial times, while organizing and fighting for their rights as sovereign nations to forge essential changes in human rights policies that affected their quality of life (Fine-Dare 2002). During this time important environmental protection policies were also enacted, some of which played a significant role in the preservation of tribal territories as well as cultural resources.

Although there are currently no policies in place that specifically address the concerns of Indigenous and traditional peoples when it comes to CKS conservation, there are at least two laws under which their protection could fall - the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA). Additionally, as I have argued, the conservation of cultural keystone species is a human rights issue and could also fall under the American Indian Religious Freedom Act (AIRFA) due to the fact that many of these species are used for spiritual wellbeing and ceremonial practices.

The National Environmental Policy Act (NEPA) of 1970 requires an in-depth assessment by federal agencies concerning the environmental impacts of proposed activities and

developments prior to implementation, while also calling for an integrated use of the social sciences in evaluating effects on human communities. Agencies are required to provide an EIS which includes a full disclosure of both the positive and negative impacts of a proposal, while also providing alternatives if significant risks to the environment or human communities are expected (Environmental Protection Agency 2018). Along with documenting potential environmental impacts, an EIS must explore the "aesthetic, cultural, economic, social, and health effects, whether direct, indirect, or cumulative" as it pertains to the human environment (NEPA 40 Code of Federal Regulations 1508.8, as cited by Eccleston 2011, 179). Although an EIS is an important and useful tool, it often lacks a robust understanding of the risks and uncertainties human communities may ultimately face.

One way an EIS attempts to determine the impacts on human communities is by conducting a social impact assessment (SIA). Unlike environmental impacts which begin as soon as the ground is disturbed, social impacts start the moment an activity or development is proposed due to the psychological effects it may have on a cultural group. The Interorganizational Committee on Guidelines and Principles for Social Impact Assessment (1994) define social impacts as,

> The consequences to human populations of any public or private action that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to norms, values, and beliefs that guide and rationalize their cognition of themselves and their society (1).

SIAs are explicitly future-oriented and seek to assess the consequences of development projects, policy changes, or government actions before they occur. They are carried out with the intent of not only understanding how human communities could be affected, but also to mitigate probable and undesirable social outcomes. Although public input is a required component of any EIS, the

public's concerns are often not addressed. Perhaps this is nowhere more obvious than the use of eminent domain to expropriate private property, or the illegal seizure of unceded traditional territories for public use or corporate development. As consultants are often hired privately by an industry seeking to develop public, private, or tribal land expert opinion regarding the impacts on human communities runs the risk of being biased, leaving little room for public needs, concerns, and opinions to be taken seriously. As Westman (2013) argues,

> One result of SIA and EIA processes is that consultants and their writings on the future assume an authority which takes discussion of the future out of the political arena and places it solidly in the technical arena, rendering debates open to technical interventions, but not to political, legal, or popular challenge. In this technical sphere, knowledge and concerns of [I]ndigenous people may be written off as community "perspectives". This is accomplished in part by privileging scientific knowledge and in part by making development seem inevitable (114).

Much could be said about cultural impact assessments as well. Under the National Historic Preservation Act (NHPA) of 1966, cultural resource impact assessments are also included within an EIS. NHPA, however, only includes "historic property" as a cultural resource which is defined as,

> Any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion on the National Register [of Historic Places], including artifacts, records, and material remains related to such property (NHPA section 310(8), cited by King 2013).

Section 106 of NHPA requires federal agencies to consider any impacts a project or development might have on historic properties, and to undergo a review process for all federally funded and/or federally permitted projects. Like NEPA, Section 106 requires scoping while determining the areas of potential effects within a project zone. This includes secondary physical effects, visual effects, auditory effects, sociocultural effects, and impacts on culturally significant natural resources including plant and animal species (King 2013, 123). Along with NEPA and NHPA, two important policies that help protect cultural resources, other advancements were made in the

succeeding decades by and for Native American communities regarding their sovereign and human rights.

Section 4.7: Human Rights Policies and Indigenous Peoples

Native Americans endured an immeasurable amount of suffering and loss as a result of Euro-American colonization, and to this day they continue to fight for their traditional territories and sovereign rights. The liberties they do have were hard won, and many of the basic human rights afforded to all other American citizens, such as control over their deceased and religious freedoms, have only been implemented fairly recently. There are 562 federally recognized tribes in the United States with treaty rights protected by the Constitution. These rights often include the right to hunt, fish, and gather in perpetuity in their traditional territories. However, treaties have often been broken, and in the 1950s many tribes lost their federal recognition which greatly impacted their access to natural resources (King 2013). Through the strength and unity of a cultural revitalization movement in the last few decades of the 20th century, however, Indigenous peoples in the U.S. put pressure on the government to pass several important laws in order to protect their communities and receive federal recognition once again. Two of the most important laws pertaining to the human rights of Native peoples were the American Indian Religious Freedom Act (AIRFA) and the Native American Graves Protection and Repatriation Act (NAGPRA).

With the passing of AIRFA in 1978, the United States Congress implemented a policy that would "respect and protect the inherent rights of Indian tribes to the free exercise of their traditional religions" (as cited by King 2013:301). Although AIRFA was a critical law in favor of Indigenous self-determination, it did not address the religious customs or ceremonies pertaining to the treatment of their dead, nor their access to natural resources and the cultural keystone

species needed for their ceremonies. Deloria (2000) believed AIRFA failed to address these fundamental rights of Indigenous peoples because it ultimately did not formally address the religious and cultural differences of American Indians.

The National Museum of the American Indian Act (NMAIA) of 1989 created the National Museum of the American Indian within the Smithsonian. NMAIA required the Smithsonian Institution, the nation's largest repository for American Indian human remains and cultural items, to inventory, identify, and when possible, repatriate human remains and funerary objects to the appropriate Indigenous nation. NMAIA was established and designed to enhance Indigenous studies, to preserve and exhibit Native American objects, and to provide a venue for Indigenous research and study programs (National Museum of the American Indian 2014). NMAIA set an extremely important precedent regarding repatriation and paved the way for the most important law to defend the human rights of Indigenous peoples and their dead: The Native American Graves Protection and Repatriation Act.

The Native American Graves Protection and Repatriation Act (NAGPRA; 25 U.S.C.3001 et seq.) is a federal law passed by Congress in 1990. NAGPRA asserts the rights of Native Americans, Alaskan Natives, Native Hawaiian organizations, and their lineal descendants to the respectful treatment and repatriation of human remains, funerary objects, sacred cultural items, and items of cultural patrimony (National Parks Service 2014). All federal agencies, as well as public and private museums and other institutions that receive federal funding, are subject to NAGPRA. Agencies and institutions are required by law to inventory and summarize their collections, consult with tribes and organizations, publish a notice in the Federal Register when determining that remains or cultural items in their possession are NAGPRA eligible, and must attempt to repatriate these cultural items when possible. NAGPRA must also be considered

whenever a development project disturbs the landscape where Native American graves and cultural items may be found.

The passing of NAGPRA was a monumental moment for both tribes and the United States. For Native peoples it was a long overdue recognition of their human and constitutional right to control the remains of their ancestors, their sacred cultural items, and protect some of their sacred sites. For the United States, NAGPRA represented an important first step in ending the injustices committed against Indigenous peoples, was a profound symbol of restorative justice, and was one of the most important human rights laws ever enacted by Congress. It is important to reiterate, however, that AIRFA and NAGPRA are fairly recent policies that address the basic human rights of Indigenous peoples in America – rights afforded to non-Indigenous peoples, particularly those of European decent, decades or even centuries before.

Although the aforementioned laws that are followed during any cultural impact assessment certainly protect many cultural resources including archaeological sites, Native American graves, and cultural artifacts, much is overlooked in the risk assessment process. Culture is a complex mosaic that includes systems of knowledge; beliefs; values; norms; patterns of behavior; material objects; structures of power, and interaction with the biophysical world while being created, learned, and shared by a group of people over time. As such, cultural impact assessments should take into consideration the complexity of a cultural group, while paying close attention to the unique rights of Indigenous peoples who may be impacted by a development project. Because of this, as King (2013) points out, "cultural resource management…needs to deal with management of the *whole cultural environment* and the effects of contemporary plans and decisions on that environment in all its aspects" (8). What is excluded from most cultural and social impact assessments is people's dependency on, and inalienable right to, the species

that sustain their physical, mental, and spiritual wellbeing and the landscapes in which define the very essence of their societies.

Section 4.8 Conclusion

The conservation of cultural keystone species is important for many reasons including sovereign rights, preservation and transmission of TEK, cultural identity, food security, land tenure, inter-generational knowledge sharing, health and wellbeing, heritage, seven generation planning, ritual, kin relations, language, natural resource conservation and management, and economic security. Specific plants and animals are important cultural resources to human groups throughout the world, and as such their protection and conservation should be considered common practice in any risk assessment process. Western science has always determined the very definition of conservation and has assumed that this is the 'best' epistemological approach to environmental management. As Berkes (2018) argues, however, "this style of conservation has neglected the values, needs, and aspirations of local people, their knowledge and management systems, their institutions, and their worldviews" (261). Only by understanding and respecting Indigenous knowledge can a new framework for conservation be implemented, one that takes into consideration the importance of cultural keystone species as well as the cultural landscape of a people.

The conservation of cultural keystones, therefore, is an act of environmental *and* social justice. However, it is clear that since there are currently no policies in place that formally or effectively address the significance these species have on a cultural group, perhaps it is time to construct a new comprehensive law that takes into account the rights and needs of *all* human communities, while also addressing the importance of preserving biodiversity and human diversity – both of which are rapidly disappearing from our world.

Chapter 5: Conclusion

The proposed Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal present significant environmental and sociocultural threats to southern Oregon and northern California communities. Over 400 streams and rivers are at risk of contamination including the Klamath, Rogue, Umpqua, Coquille, and Coos rivers as well as the entire Coos Bay estuary. The pipeline would require a highway-wide permanent clearcut spanning its entire length and would disrupt over 6 miles of fragile wetlands, thousands of acres of public lands, and put numerous endangered and threatened species and their habitats in jeopardy. Natural gas is highly explosive, and this project would be located in a region already prone to increasingly severe wildfires and an inevitable subduction zone earthquake and subsequent tsunami, presenting potentially catastrophic consequences for local residents. Traditional tribal territories, sacred sites and burial grounds, and cultural resources are also at risk, as are the important cultural keystone species that Indigenous peoples depend on, such as salmon. To the communities within the hazard zone, these risks are just too great to justify the placement of a pipeline here.

Hundreds of community members have come together in the last decade and formed a strong alliance made up of what many referred to as “unlikely allies”. This alliance is pushing back against a Canadian industry and government agencies that residents believe do not have local interests in mind. Communities within the hazard zone main concerns include impacts to the waterways they depend on for drinking water and recreation; threats to salmon and other important species; the acceleration of climate change, and how the pipeline project, when coupled with natural disasters, could have cataclysmic effects on the region.

The last Environmental Impact Statement that was published in 2015 states that the industry has taken every precaution to ensure the design of the project meets federal and state

regulations, and that the pipeline and terminal will be constructed to the highest safety standards possible. Community members in this study felt that was not enough and had very little faith in these promised safety measures. Many local residents also believe the industry has lied to them about the amount of promised jobs and tax revenues, and that their voices have been ignored by state and federal agencies that are supposed to protect all U.S. citizens. Because of their lack of trust in the industry and government, community members have taken it into their own hands to fight the pipeline. The overwhelming opposition from residents in the affected area view this project as an act of environmental injustice, and are prepared to continue their resistance for as long as it takes. Many noted the inspiration that the water protectors at Standing Rock gave to them, and although they would like to avoid the type of state-sponsored violence seen in the No DAPL movement, they are also committed to protecting their homelands and their communities by any means necessary.

We live at a crossroads in human history where the next few decades will play a crucial role in the survival of our species and life as we know it on our planet. With each passing year the impacts of climate change become more pressing and scientists' warnings become more urgent. We now know that the burning of fossil fuels is the number one contributor to the climate crisis, and unless we ween ourselves off of unsustainable energy sources things will only get worse. Whether or not the Pacific Connector Gas Pipeline and the Jordan Cove Export Terminal are built remains to be seen. When the new EIS is published in 2019, will the Federal Energy Regulatory Commission reject the proposal once again, or will they approve the project while ignoring the concerns of those who will ultimately bear the burden? Only time will tell. What is apparent at the time of this writing is the strength, persistence, and solidarity found in the resistance movement. As one research participant stated, people cherish the environment here too

much to let it go down without a fight, and it is because of this deep connection to place that local residents believe this region, rich in biodiversity, is worth protecting. I would have to agree.

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