

Reclaiming Fire: Fire Management as a Form of Autonomy and Self-Determination for  
the Karuk Tribe of California

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Defending November 4th, 2019

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## Abstract

In the uppermost Northern corner of California the Karuk Tribe lives in symbiosis with the environment around them. For thousands of years, the Karuk Tribe has called, what is know today as the Klamath Mountains, home. Central to their home and their culture is the stewardship of lands through small fires. The Karuk people started fires to promote food security, safety in their home and exhibit cultural traditions. Their cultural practice, food security ,and safety, however, was taken when European settlers made their way northwest. The Karuk Tribe was restricted from their lands and their practice on those lands. This restriction meant a complete removal of Karuk fire from landscape, even on privately Karuk owned lands, fire was removed. Simultaneous to the removal of Karuk fire from landscape, the general fear of fire raged throughout the United States. The federal government created institutions to enforce complete fire suppression on public and private lands without fully understanding the well-established benefits of prescribed fires. Wildfire danger in the Klamath is heightened, due to over 100 years of fire suppression. To protect their lands and their people, the Karuk Tribe has begun to lead and create innovative fire management agencies that reintroduce successful fire management. To demonstrate how these agencies have benefitted the Karuk Tribe, this project aims to highlight the benefits of these management projects. The historical context to fire will add to a Karuk perspective of fire as good fire and toward reclaiming land. I intend to show how the Karuk has reclaimed fire for their aboriginal territory and with access to traditional practice on federally restricted public lands.

**Key Words:** *Fire; History; Traditional Ecological Knowledge; Indigenous Peoples; Tribal Sovereignty; Natural Resource Management; Public Lands; Federal Forestry Agency; Policy*



**Figure 1** Original Image taken by Author. Painted on the side of a grocery store in Orleans, CA. The mural shows two sides of the Klamath region, on either side guarded by elders. On the left there are dead salmon, clear-cut and logged portions of forest, and a dam. On the right there is a flourishing ecosystem, living fish and the Karuk elders are watching over the Klamath. The mural also depicts coyote on the middle right dancing next to prescribed fire that is catching light to small flora and being controlled by a Karuk citizen. The ceremony shown in the center of the picture is a Karuk sacred tradition involving salmon and fire. There are also small fires in the upper right hand hills represent Karuk stewardship of their aboriginal lands.

## 1 Introduction

“The federal government has taken fire from the people. Now we have to take it back,” says the Karuk Tribe’s founder and director of the Department of Natural Resources, Leaf Hillman. The Karuk Tribe has lived for centuries in the most Northern corner of California in a bio-diverse mecca known today as the Klamath Mountains region. The Karuk call the place between the Ishkeesh River and the Masuhsava River, *Katimin* or "the center of their world" (Karuk Tribe via Karuk Tribe Official Website). Here, the Karuk people have always lived in symbiosis with the Klamath Mountains, stewarding the land with fire until settlers came west. As Leaf Hillman states above, the result of settlers taking fire from landscape is that the Karuk no longer have an ability to steward their ancestral home. For thousands of years before their land was reinstated, the Karuk practiced prescribed fire setting<sup>1</sup> and this is why the Klamath Mountains have a uniquely biodiverse ecosystem today (Norgaard, 2019). As the Karuk people used fire to take care of the forests, fire also took care of them. With prescribed fires, the Karuk were

<sup>1</sup> Prescribed fire is intentional, controlled fire setting during low-risk fire season (Quinn-Davidson and Varner, 2011).

able to mitigate their vulnerability to destructive wildfires during the dry season. In figure 1, a mural represents Karuk life in Orleans, CA. Centermost in the mural is a depiction of fire that represents the way the Karuk Tribe sees fire; as a non-menacing process, woven into Karuk life with humans, fish, trees, and air. To the Karuk, "fire is life," but European settlers directly contested this notion in the 19th century (Tripp et al., 2013). The United States government claimed these Karuk lands as their territory, and so with funding and force, fire disappeared. The alteration of Klamath Mountains, created an effect on everything and everyone native to this environment. The Karuk lost food security, citizen safety from out of control wildfires, and the sovereign right to have determination over their aboriginal homelands.

The Karuk Tribe is one of the largest Native American tribes in California. The United States government forced them from their original territory and reclaimed Karuk lands majorly as public space. In the attempt to negotiate "friendship and peace," the U.S. Senate authorized the Agent Redick McKee Treaty of 1851 (Heizer, 1972). The treaty intended to allot the Karuk a section of continuous land. It was one of 18 treaties created in California during this time period "one cannot imagine a more poorly conceived, more inaccurate, less informed, and less democratic process than the making of the 18 treaties in 1851-52 with the California Indians." (Heizer, 1972). The United States did not ratify the treaty, and at the time, no allotment of land was set-aside for the Karuk people. The Karuk's once 1.04 million acre territory became several small parcels of land which Karuk elders fought for and purchased (Karuk Tribe Official Site). Today, a mere 1,661 acres within this area remain Karuk lands, with 900 acres recognized as trust lands (Karuk Tribe Official Site ). The vast majorities of Karuk aboriginal lands are now public

lands; but are far from being genuinely public (Karuk Tribe Official Site ). The Klamath Forest reserve was set-aside as public lands by Theodore Roosevelt in 1905, and since that date, Karuk prescribed fire vanished from the forests of Klamath Mountains (Karuk Tribe Official Site). In the eyes of the federal government, the Karuk people do not have any jurisdiction over their home. With no jurisdiction, their native practices disappeared from the landscape, and the colonists ignored the needs of the forest, including the use of fire as a management resource. Since the removal of Karuk people and their fire, the Karuk have pursued gaining back autonomy and sovereignty over their lands. In their own words, the Karuk Tribes' mission is "to establish equality and justice for our tribe, to restore and preserve Tribal traditions, customs, language, and ancestral rights, and to secure to ourselves and our descendants the power to exercise the inherent rights of self-governance." (Karuk Tribal Council, via Karuk Tribe of California Official Website). This mission begs the question; how Karuk can exhibit Tribal traditions, customs, and inherent rights on lands that are still under United States Federal Control? Secondly, how can the Karuk people can be a sovereign Nation, holding responsibility for the entirety of their ancestral home, without a reservation? The Karuk have responded to these questions with the creation of Karuk run and led tribal agencies that have sculpted efficient plans and projects for land management. Essential to their mission, the Karuk Tribe's natural resource management department placed a particular emphasis on the restoration of fire, through prescribed fire (Karuk Tribe Department of Natural Resources, via Karuk Tribe Official Website).

In this paper, The Karuk Tribe's fire agencies and tactics serve as a case study for how traditional ecological knowledge, through management plans can lead towards tribal

autonomy and ancestral rights on their lands, regardless of title. For many Indigenous Peoples in the United States, public lands act as a barrier for traditional practice and connection to home. The Karuk Tribe demanded the ability to manage their lands. Public lands and the US Forest service, however, have not responded to an ancestral claim to the lands. The Karuk Tribe countered this inaction by creating a variety of different agencies with the intent to protect Karuk People and the Klamath Mountains. The US Forest Service has responded to the Karuk fire agencies and as such, the Karuk people now have an opportunity to practice prescribed fire on public land. The restoration of fire to landscape has shown the importance of integration of traditional ecological knowledge, but also how a Tribe's agency is promoting knowledge that impacts the entire public. The Karuk Tribe's agencies have created a path for them to regain autonomy through the setting of prescribed fires.

My paper format starts with the context of Indigenous fire practice within literature, introducing a commonality among Indigenous communities and their relationship to fire as a form of resource management. I introduce studies that have highlighted Indigenous voice and perspective of fire. I review the Karuk definition of self-governance to provide clarity, within this paper, of the goals of the Karuk people. I then highlight research, that relates to Indigenous governance in the United States, specifically focusing on Indigenous stewardship on public lands. Building on this foundation, I will then discuss the consequences of removal of fire from landscape; in order to provide context of some challenges tribal fire practice may face within a Western societal structure. Through evidence provided by the Karuk tribe, I focus on three Karuk fire agencies that have shown extremely efficient forms of fire mitigation

and management. The discourse surrounding indigenous fire practice, settler colonial fire institutions and fire ecology became the foundation of my project due to a limited time spent working with the Karuk Tribe in the Klamath Mountains. With the time I did have to converse with Karuk representatives, I articulate on an important Karuk argument “science as advocacy,” (Leaf Hillman, Personal Communication, September 28<sup>th</sup>, 2019). Finally, I will discuss how fire agencies have created a foundation of science as a form of advocacy for the Karuk Tribe, and argue that fire agency is serving as a way to regain autonomy over ancestral rights to land.

## **2 Native Fire**

For the purposes of this paper *Indigenous Peoples* will be used to describe “The communities, clans, nations and tribes we call Indigenous peoples are just that: Indigenous to the lands they inhabit, in contrast to and in contention with the colonial societies and states that have spread out from Europe and other centres of empire,” (Alfred and Corntassel 2005). Building on the contrast contested by Alfred and Corntassel, I argue that being Indigenous in the United States involves fighting for sovereign rights over aboriginal lands within a system of public lands. At the forefront of the systematic removal of Indigenous Peoples from their aboriginal lands was the Indian Removal Act of 1830. The Act, put into place in by President Andrew Jackson, demanded the forced migration of Indigenous Peoples from their ancestral homelands. Although the decree directly affected citizens of the Cherokee Nation at the time, it was the first example of Indigenous dispossession rationalized through the logic of elimination (Wolfe, 1999). After this, the systematic removal of Indigenous Lands continued to all corners of the United States. In 1840, beginning with the Bartleson-

Bidwell Party, settlers arrived in California. Soon after they arrived, they discovered gold, and California began to explode with settlers seeking their fortune. As the population boomed, settlers claimed more and more ownership for Indigenous territory often without compensation for the lands taken (Leeds 2005).

To take back ancestral home, today, many Tribal Nation's constitutions emphasize Sovereignty, this includes the Karuk Tribe:

*We the Karuk Tribe being a sovereign native people, in order to form a representative tribal government, to promote the general welfare of all Karuk people, to establish equality and justice for our tribe, to conserve and restore our common bonds and preserve our tribal traditions and ancestral rights, to secure to ourselves and our descendants the power to exercise the inherent rights of self-government do hereby establish and adopt this constitution of the Karuk Tribe.*

Karuk Tribe of California Constitution via Karuk Official Site, 1985

The latter definition will provide the framework for the rest of this paper. In order to review the challenges faced toward Indigenous Peoples and sovereign rights, I review the discourse past and present of Indigenous Sovereignty. The United States planned to “give” Native Americans sections of land defined as Indian Country that Tribes would have sovereign rights over. Only a fraction of the land was sectioned off as reservation lands and Trust lands (Dunbar-Ortiz, 2014). Within the state of California, where there are 109 recognized tribes and 78 petitioning tribes, there are small sections of Reservation, Trust and Rancheria lands (Anderson, 2006). The vast majorities of lands once belonging to Indigenous Peoples, however, became public lands and now fall under federal jurisdiction (Anderson, 2006).

Even the definition of lands as Indian Country, which relies on the pretense of self-governance fall under Government regulation, and the Indigenous peoples who live on them are not truly able to govern. Vine Deloria Jr. asks, “Why shouldn't tribes have total sovereignty? Originally, they did. Treaties recognized this basic fact of legal

existence. Tribes agreed to go to the reservations provided they could have their basic community rights of self-government.” (Deloria Jr, 1988). This case was true with the setting of prescribed fires, there was no ability for tribal nations to set fires on their lands. With the creation of the U.S. Forest service in 1905 all forests, public or private were restricted from fire (Pyne, 2015).

Further extending the injustices the United States did not ratify, many treaties like the Mckee Treaty, that intended to grant Indigenous people jurisdiction over their home. Discourse suggests that the retraction of Indigenous sovereign right and autonomy to their land resulted in various impacts, including both climate change vulnerability and physical health (Kimmerer 2015; Norgaard 2019). Etching borderlines into the lands from a colonial perspective, leaving autonomy over land with the owner of the lands.

The lines, however, are arbitrary to Indigenous Peoples. Bijorn Sletto suggests, “Indigenous people don’t have boundaries” and further argues that the borderlines drawn were often not correct representations and acknowledgment of the aboriginal sense of place (Sletto, 2009). The borderlines, however, are not only on the map as socially constructed borders, but society also draws them through ingrained bigotry. A letter written by the United States Department of Agriculture's District Ranger to the Forest Supervisor "Mr. Rider," gives insight into the racism and criminalization of Indigenous peoples by targeting Karuk fire practice. The letter is about the reduction of human-made fire, specifically to prevent Indian fires if "you catch one [an Indian] sneaking around in the brush, like a coyote, take a shot at him."<sup>2</sup> (First Edition of the Salmon River Ranger Fire Letter, provided by Shay Bourque). With this type of genocidal discourse and

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<sup>2</sup> Quote taken from the Salmon River Range Letter from the District Ranger of the Klamath Forest to the Forest Supervisor of Yreka California Mr.Rider. This letter was provided by Shay Bourque of the Karuk Tribe Natural Resource Department.

practice, fire was put into the same category as the Indigenous peoples of the Klamath region were put into and both were to be suppressed. Euro-Americans sought to control and to disempower, leaving the forests devoid of the Karuk's stewardship resulting in the status that they are in today.

The exacerbated fire danger in the state of California is intrinsically linked to the creation of public lands and to the elimination of Indigenous natural resource management. I argue that the concept of fire suppression is the single most impactful colonial firefighting tactic. Suppression of fire in forests results in invasive species, decrease in soil nutrients, death and decline of both flora and fauna and increases the danger for crown fires with each passing year of no fire (Diver 2016; Norgaard 2019). Literature for the past two decades reflects that a solution is Indigenous participation and leadership in fire management and the importance of Indigenous fire knowledge. M. Kat Anderson reviews specific uses of Indigenous Fire in California. She affirms the positive influence that fire had with the vegetation in forest regimes and the role Indigenous fire practice played in this influence (Anderson 2006). Furthermore, she addresses the detriment of fire suppression to Indigenous Peoples economically, socially and ecologically.

Fire practice in California is addressed under three overarching themes articulated by Kari Norgaard, M. Kat Anderson and Frank Lake. The first one is the politics of Indigenous homelands, the second is the social aspects of fire perception/understanding and the last is the fire ecology of the environment and the increase of crown fire<sup>3</sup> danger. Within the latter themes, I focus directly to the Karuk Tribe. The contemporary literature,

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<sup>3</sup> A crown fire is a wildfire reaching the tops of trees. This type of fire is quick moving, lethal and extremely hard to control (Rasmussen et al., 2007)

working with the Karuk people, solidified a significant connection in the Karuk tradition with fire practice. Analyzing the Karuk economic relationship with fire, Kari Norgaard underlines the food security of the Karuk People (Norgaard, 2019). The Karuk Tribe is located in an extremely remote region and for thousands of years they were reliant on fire as a tool for boosting crop prosperity and promotion of nutrients in their rivers (Norgaard 2019). A significant food source is Xunyêp<sup>4</sup> (Tanoak) acorns found on trees and shrubs, which are native to the Klamath region (Lake 2019; Norgaard 2019). Fire ensures the prosperity of the Tanoak by promoting germination; Tanoak sprouts back very quickly after a fire (Cheney, 2011). A secondary, but equally as important source of food for the Karuk is the Salmon of the Ishkeesh and Masuhsava rivers. To "protect the upslope" meant to create fires that would reduce the possibility of harmful materials getting into the rivers (Bill Tripp, via Norgaard, 2014). When wildfires get out of human control and began to burn at very high temperatures and they release a gas that condenses as a waxy soil coating (Biology in the Region, 2014). The waxy soil prevents water from soaking in; which results in increased river flow and erosions (Biology in the Region, 2014). The erosion and flow can be extremely harmful to the aquatic lives that are exceptionally sensitive to any change of their environment (Biology in the Region, 2014). Harmful retardants used for fire suppression also impacts the Salmon population for the same reasons, aquatic life cannot survive dramatic shifts and harmful chemicals (Bio in the Region, 2014). Two extremely important aspects of the Karuk diet have shifted the way their people have eaten for thousands of years and this negatively impacts their health (Norgaard, 2014). Acorns and Salmon are just two of the food source enhanced by fire,

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<sup>4</sup> The Karuk word meaning Tanoak, provided by Kari Norgaard in Karuk Traditional Ecological Knowledge and the Need for Knowledge Sovereignty, 2014, page 15.

but they are significant and with her attention to them, Dr. Kari Norgaard is drawing academics into a dynamic discussion about the adverse effects that the removal of fire has had on the food security of the Karuk people (Norgaard, 2014). Having the ability to feed oneself is one of the inherent rights of human beings as defined by the United Nations (Human Rights, via United Nations Official Site).

A secondary human right taken from the Karuk people, is the right to cultural freedom (Human Rights via United Nations Official Site). Fire was cultural practice to the Karuk Tribe. Fire, holds significant cultural impact to many Indigenous peoples and discourse is proving a parallel between cultural practice and symbiotic process with the land (Salmón, 2017; Kimmerer and Lake, 2001; Levy, 2005; Anderson, 2006; Skinner et al., 2006; Rasmussen et al., 2007; Norgaard 2014; Pyne, 2015). Ceremonial practice ranged, "They [Karuk ancestors] used to roll logs off the top of Mountains as part of the World Renewal Ceremony in September" this was ceremony, but it acted as a way to clear the forest of fallen logs during fire season, making it so that the "mountain was in a condition to where it wouldn't burn hot" (Bill Tripp, via Norgaard 2014 page 78). The Karuk Tribe also participates in the weaving of traditional baskets, which is a ceremonial practice shared by many Indigenous Peoples in California, all relying on fire for the growth of traditional grasses (California Indian Basketweavers' Association Official Site, 2019). Examples include, Panyúrar<sup>5</sup> (beargrass), athithxuntápan (hazel) and willow, all native to the Klamath (Norgaard, 2014). The collection of acorns in a traditional baskets, woven from Beargrass, is another form of cultural practice that required prescribed fire

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<sup>5</sup> The Karuk words for Beargrass and Hazel provided by Dr. Kari Norgaard in Karuk Traditional Ecological Knowledge and the Need for Knowledge Sovereignty, 2014, page 15 and Aja Conrad via Karuk Official Site, 2018.

(Conrad et al.,2018; Karuk Tribe Official Site). Fire is also part of the Karuk’s narrative and a key element in the Karuk creation story:

*Coyote wanted to steal fire, which had been lost in a bet. He collected various animals, and placed them at intervals from the river to the mountains. Frog was in the first place - closest to the river. There was forest fire in the mountains, and he stole it by diverting the children who were in charge of it, and then pretending to fall asleep by the fire, having placed oak bark between his toes. At the right moment, he ran away with a piece of burning charcoal. The ember got passed from one animal to the next as each got tired. Turtle was able to escape by rolling down from a mountaintop towards the river, and then gave it to Frog. Frog hid the fire in his mouth, dived into the river and swam to the other side, and spat the fire out under a Willow. Dogs howled as the fire rose up, and mankind came into existence.*

Tripp et al, via Somes Bar IFMP, 2017

In this Karuk story, passed down from generation to generation, fire rose and so too did mankind, fire and humans are inextricable from each other. This story of creation is important because it reflects the way the Karuk Tribe sees fire and values the ability to light prescribed fires. To the Karuk Tribe Fire is in an integral part of their daily practice and the core of their physical and cultural existence.

Both the economic and cultural practice of the Karuk Tribe places a particular emphasis on Traditional Ecological Knowledge. A multidisciplinary range of studies is focused on the Traditional Ecological Knowledge (TEK) of many Tribal Nations around the United States. TEK represents the restoration of historical landscape and an understanding of Indigenous practice within these landscapes (Kimmerer and Lake, 2001). Discourse places TEK in contrast to the perception of a Euro-American knowledge that does not encompass what the lands need (Hunnington, 2000; Kimmerer and Lake, 2001). Additionally, natural resource management organizations are placing an emphasis on TEK. Western science reflects, “ecological abundance was created through coordinated management between forest and fisheries, and amongst multiple tribal

communities” (Norgaard, 2014, pg. 16). To restore the forests to the state that once were, it is important to begin engaging TEK as a solution, especially within forest ecosystems (Bardsley et al, 2019). Looking to Australia for example, the integration of TEK and human-ignition regimes is showing success in the reduction of overall fire danger and forest health (Bardsley et al, 2019). Within the scope of fire management and mitigation, discourse acknowledges a widespread need for TEK within fire regimes and points out the importance to understand history of what once ensured forest health pre-colonial North America(Lake and Kimmerer, 2001).

### **3 Fire and Settler Colonialism**

#### **3.1 Timber Industry**

The management of the forests and the removal of Indigenous practices cleared the path for settlers to seek their own fortunes and management of the forests. The gold brought settlers to California, but it was the plethora of resources that attracted them to stay and extract. In 1876, roughly 20 years after the McKee Treaty was drawn up, there was a peak in mining and resource extraction in California (Brechin 2006). The growth of industry and capital in California transformed forests into lumber. (Brechin, 2006). During the industrialization of California, mines and mills consumed hundreds of miles of lumber from the Sierra Nevada Mountains (Brechin, 2006). The Klamath Mountains, in particular saw a great deal of lumber extracted for the construction of gold mining buildings and structures (Watts M et al., 2006). Settlers also used timber for the construction of large flumes to transport water for hydraulic mining (Brechin, 2006). This insatiable appetite for lumber created a need for unburned, fuel heavy, forests; manufactured easily with fire suppression (Dombeck et al., 2004). Conservationists and

Forest Service officials, Franklin Hough and Bernhard Fernow, share a definition of “modern forests” as being used for their resources, leaving very little room for any destruction caused by fire (Miller, 1992). To control the fires was to control the security of capital in California.

In addition to the onset of mining in California, there was also an agricultural boom, which required large areas of land that demanded timber extraction (Olson-Paymer, 2014; Muir<sup>6</sup>, 1941). The slash and burn technique was used to clear space for agriculture, ultimately leading to some of the more severe and destructive wildfires such as; the "Big Blowup" (Muir, 1941). When the U.S. stole lands from the Native Peoples of California, riparian rights gave farmers the ability to use the land indiscriminately for water extraction, deforestation and production (Olson-Raymer, 2014). In an article written for *The Humboldt Times* author Andrew Isenberg wrote, "our immense forests of timber, as a source of wealth, are as valuable as the best gold mines in the State, and they are equally inexhaustible" (Isenberg, 1858). Manifest Destiny gave settlers the unmistakable impression of an inherent right to the lands they took and thus, the ability to profit from them (Norgaard, 2019). The fuel for the construction and industrialization of California came from harvested wood (Brechtin, 2006). California extracted much of its timber from this the Klamath region (Olson-Raymer, 2014). The profits made in Northern California further extended to the intentional allotment of lands (Middleton Manning, 2018). Part of the reason for the lack of a Karuk reservation is due to the value that the state of California saw in the Klamath timber, corrupt reduction of lands happened to many tribal lands around California (Middleton Manning, 2018).

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<sup>6</sup> I want to make note here at the distinction of W.D. Muir and my use of his document from 1944.

### 3.2 Wilderness as a Western Construct

As California was industrialized and cultivated for agriculture, the population boomed. More and more settlers came and today, we see the impact of the industrialization of California in the dense population of people. The population boom is significant because its impacts inspired an American president to halt the indiscriminate destruction of the Klamath Mountains. As a way to prevent environmental degradation of lands, President Lyndon B. Johnson signed the Wilderness Act of 1964 into public law. The Wilderness Act sought to protect public lands from the post-WWII extractive industry and “growing increasing population, accompanied by expanding settlement and growing mechanization.” (US Congress, via Department of Justice Official Site). This sentiment that lies at the core of the 1964 Wilderness Act is to ‘protect’ and ‘preserve’ wild places (Pyne 2015). Under the Act a wilderness area was defined as a place “untrammelled by man,” with humans permitted only as visitors (Wilderness Act US Congress, 1964; Klein, 1994; Lake and Kimmerer, 2001; Carroll, 2015; Pyne, 2015; Norgaard, 2019). The outlook was to Euro-American environmentalists and conservationists this act was securing pristine areas away from the “human disease,”(Cronon, 1995). Through the pursuit to cure to the ‘human disease’ settlers eliminated Indigenous practice from the landscape and failed to acknowledge any proactive human-related processes within these areas. A paradigm shift occurred and wilderness was now a place separated from humans. Humans who had stewarded the forests for years were now gone. Primarily removing prescribed fire, which becomes one of the first examples of a vanishing human process in the newly defined Euro-American wilderness (Quinn-Davidson and Varner, 2012; Stephens et al, 2008).

### 3.3 Public Enemy Number One

The forests of the United States remained fearful of human impact. Interestingly, the human impact that many forest institutions focused on was the accidental ignition of fires (Dombeck et al., 2004). Responding to this fear, a fire prevention marketing campaign launched on August 4th, 1944. A brown bear wearing a park ranger hat surfaced around the United States' Forests with a clear message about fighting fire (USDA Official Site). Smokey Bear was now the face and voice of fire suppression with his declaration, "Remember, only you can prevent forest fires," throughout US Forests located on public lands, his messages reinforced that no fire was good fire (Pyne, 2001). On public lands today Smokey the Bear is still a mascot, of sorts, to the forest service. To the average non-native Smokey is an innocuous symbol of care for forests (Kosek, 2006). To tribal Nations indigenous to forest ecosystems reinstated as public lands; Smokey is a symbol of colonialism and narrow mindedness (Kosek, 2006). Jake Kosek writes that Smokey personified an "exclusionary understanding of the nation and public with a complex deeply contested forest landscape," (Kosek, 2006). The deeply contested forest landscape that Kosek is referencing here is the landscape we see today, one removed from a symbiotic process with people. Smokey made the removal of Indigenous practice and management a popular way to protect and conserve land (Kosek, 2006; Pyne, 2015).

The Smokey campaign seemed to be a natural and “good” idea because a fear of fire, as pyrophobia engrained in US society and policy. In 1910, thirty-four years before the Smokey campaign a large wildfire known as the *Big Blowup* struck Montana, Idaho and Washington and burned 3 million acres (Pyne, 2015). The fire had a lasting impact on federal land management, shifting efforts towards complete fire suppression. Arson was the new word for Human-started and the consequence for arson was jail time (Pyne, 2015). Federal institutions poured funding into fire-fighting agencies to rid the forests of all fire (Pyne, 2015). Fires inevitably meant devastation, as proponents of suppression claimed. Even when science began to reflect the positive aspects of fire on forest

ecology, federal agencies continued to suppress fire. Fire suppression significantly within the US Forest Service who sought to protect “public” forests, land and science (USDA Official Site). “Public” is purposefully in quotation marks here because the U.S. forest service in California directly ignored the light-burning controversy; which predicted the buildup of fuels and demanded for Indigenous presence in their aboriginal forests (Nijhuis, 2015).



**Figure 2:** Courtesy of National historical archives, via Jake Kosek, 2006. Depicts a propaganda poster designed to highlight and promote fire as the “red-menace”.

#### **4 Klamath Mountains Ecological Dynamics**

Adding to the complexity of fire in the Klamath Mountains is the physical climate aspects. The Klamath Mountain region is a Mediterranean climate with very wet, cold winters and arid, warm summers (Frost and Sweeney 2000; Skinner et al. 2006; Diver 2016). During the summers, the area is subject to very high winds and low humidity, making the summers very vulnerable to more enormous wildfires (Diver, 2016; Hull et al., 1966). The winters, however, are entirely different; as the atmospheric pressure in the environment drops, so too, do the temperatures (Diver, 2016). The humidity and the moisture increase antithetical to the pressure and temperatures (Odion et al, 2004; Skinner et al., 2006; Diver, 2016). The ecosystem of the Klamath that thrives in this climate is incredibly diverse in both flora and fauna (Taylor and Skinner 2003; Skinner et al., 2006; Diver, 2016). This diversity is due to the evolutionary force of fire shaping the Klamath over thousands of years. (Frost and Sweeney, 2000).

Additionally, the topography of the Klamath Mountains also makes them unique. The woodlands of the Klamath are located on steep Western slopes and are very dry (Skinner, 2006). The location and lack of moisture makes fire resilience during summer periods a crucial part of the Klamath ecoregion process (Skinner, 2006; Tripp, 2013; Diver; 2016; Norgaard 2019). If these woodlands have not seen fire throughout the year, they are more likely to burn in high fire season (Diver 2016; Skinner et al. 2006; Norgaard 2014). Lightning storms are common to the Klamath Mountains; there are an average of 12.8 strikes per year per 100 kilometers squared (Skinner, et al. 2006). Lightning is the only natural igniter of fires and might start as much as one hundred fires in a 24-hours (Skinner et al., 2006). The steep topography of the Klamath does not allow

for easy suppression of fires, and so the forest must fight fires on its own (Skinner, et al. 2006). The Karuk knowledge to start small fires during the low-risk wet season, as well as where to start the fires, is essential in helping the forests fight fire and prevent extensive devastating wildfires --which everyone, of all points of view, is fearful of in the Klamath.

#### **4.1 Climate Change**

The Karuk Tribe is increasingly vulnerable to the effects of climate change. The increase in temperatures due to carbon emissions influences the risk for devastating wildfire in the Klamath in average global temperatures and the substantial impact on the ecology of mountains (Skinner et al., 2006; Barr et al., 2010; Breen, 2017). As a generalization in the Western United States, the increase of carbon emissions leads to an increase in broad temperature gradients (Coop, et al. 2010; Hurteau et al., 2014). The winter season therefore, provides less moisture, due to the overall decrease of consistent snowpack (Coop et al., 2010; Hurteau et al., 2014). Reduction in snowpack causes a net reduction in soil moisture and makes forests less resilient to lightning strikes (Lutz et al., 2009; Coop et al., 2010; Thode et al., 2011). The temperature and moisture in the Klamath, specifically, have been changing last 15 years (Breen, 2017). High are elevation zones, such as the Klamath, have exacerbated climate change impact because of the increased ecosystem vulnerability (Hurteau et al., 2014; Schwartz, et al. 2015; Meyer, et al. 2015). Through Landsat, different GIS technologies, and individual temporal analyses, discovering that the status of the forests is creating a better likelihood for more massive and more severe fires (Pausas and Lloret., 2007; Miller et al., 2009; McCarley et al., 2017). The impact of climate change is relevant to this paper because it adds to the timing

of fire danger and gives further urgency to the need for immediate change in the Klamath region.

## 5 Methods

Fire dynamics are rooted ecologically, socially, and economically in the United States today, as well as in the past. Accordingly, the discourse I enlisted was to understand fire from those three categories. While analyzing the discourse, I paid particular attention to the implementation and discussion of indigenous fire practice. The discourse used was determined based on four principles; emphasis is work with the Karuk Tribe and the Klamath Mountains, perceptions of fire and the implications, fire related policy past, present and future any, the intricacies of Indigenous sovereignty in the United States. While looking through discourse, I asked myself one overarching question; what is the difference between fire as seen by Indigenous People and colonists? With a careful examination of my overarching question through the principles I looked at, I was able to link the ecological and economic aspects of fire to the social implications on the Karuk tribe (both positive and negative).

To lead me towards answering my questions concerning wildfire in California, Karuk Tribal politics, and federal politics, I drew from four different books within these fields. In order to answer my questions on Karuk and Klamath, as mentioned above, I relied on Kari Norgaard's *Salmon and Acorns Feed Our People*. Then, to analyze the social aspects of fire in the United States, I studied *Between Two Fires* by Stephan Pyne and *Understories: The Political Life of Forests in Northern New Mexico* by Jake Kosek. I also explored *Upstream: Trust Lands and Power on the Feather River* by Beth Rose Middleton Manning for economy and policy about Indigenous lands in the United

States. Finally, to ground my research to California, I looked at *Imperial San Francisco* by Gray Brechin. Researchers such as Robin Kimmerer, Frank Lake, and Kari Norgaard, have roots in both western science and TEK. In order to understand the ways that the two concepts are complementary or vastly the same, I analyzed their research as well. Robin Kimmerer and Frank Lake wrote "The Role of Indigenous Burning in Land Management," which was an Indigenous written and presented analysis of land management. This article was necessary for my research on a complete integration of a non-Native sciences and Indigenous science.

In order to apply what I learned through the discourse and to work directly with the Karuk tribe, I traveled to Orleans, CA, and Happy Camp, CA. When I arrived at the Karuk Department of Natural Resources, I first met with Shay Bourque, the Karuk Tribe higher education coordinator and discussed the ethics of tribal research and my goals for the projects. My emphasis was on mutual benefit between the Karuk Tribe and myself, which reflected in equitable effort and help that the Karuk Tribe gave me, and I have given them. I requested two interviews from Leaf Hillman, the director and founder of the Natural Resource Department, and Vikki Preston, the Cultural Resources Technician for the Karuk Tribe. These informal interviews served as a way to understand the professional jobs and goals of the Karuk descendants involved in fire agencies. Leaf Hillman and Vikki are both heavily involved the Karuk mission to reintroduce fire to their aboriginal homes. These interviews further focused the direction of my paper and added specificity to my assertions. The new perspectives I gained included, but were not limited to my improved understanding of the impact of the messaging and the messenger of colonial suppression in the Smokey Bear campaign. Leaf Hillman spent a significant

amount of time discussing the legacy of Smokey Bear and policy in the Klamath. Hillman's focus on Smokey directed my focus on an analysis of the historical and current perception of wildfire in the United States. Furthermore, Vikki Preston has done a significant amount of work with a prescribed fire training called TREX. Other projects mentioned were the Western Klamath Partnership and the Somes Bar Integrated Fire Management Plan. Both individuals, discussed the importance of these sophisticated management plans. I found similar viewpoints and information in my publicly sourced interviews with Karuk citizens, as well.



Figure 3. Original image taken by author, 2019. Located in a very small between Edna CA. and Orleans CA. In the middle of the Klamath Mountains. Signs such as this one was posted all with the 'very high' danger depicted. I took this to represent two aspects of the Klamath. The first aspect was that the brown sign is a very standard practice of the U.S. Forest Service. Clearly marking these lands as public space. The other was the severe risk for danger that many residents of this Klamath region are in.

In my travels, I made careful observations of the Humboldt County area and the Klamath Mountains, paying particular attention to any information related to fire. My initial observations of the area were that many communities are in very remote, isolated zones surrounded by dense forests. Small communities, at times, only had a hose to help them if fire were to come near their homes, and the forests seem to integrate with urban-

rural space completely. Each town I passed through I saw signs such as the one featured in figure 3. The constant "very high" fire danger posted the entire time I was there, showed not only that fire is a prevalent part of the Klamath area, but also that communities have a constant consciousness of fire destruction.

My attention was also brought to fire management programs and the Karuk Department of Natural Resources. I compared Karuk's DNR to fire departments/institutions in the same region. The Karuk's neighbors, Hoopa Nation, reside on a reservation just two hours outside of Karuk Lands. Uniquely, the Hoopa have the only federally recognized fire department entirely run and staffed by a Tribal Nation (Hoopa Nation Fire Department Official Site). When I arrived at the station, I found an entirely Hoopa staff, with three massive engines and significant equipment to protect their lands from large wildfires. Still, the department struck me as heavily influenced by a western ideology of firefighting, and the station makes a note of funding provided by CalFire. The Hoopa fire department is playing an integral part in protecting its people and land while appeasing federal fire agencies, by working with the framework of firefighting, which is still under Euro-American dictation. This visit clarified for me what makes fire management plans different from fire-fighting departments; which provided another contrast to the Karuk agency concerning fire.

When observing I wanted to recognize my bias as a researcher, outsider, and student and will, thus, discuss my positionality when looking at wildfires and tribal sovereignty. I am not a citizen of the Karuk Tribe, and my understanding of the Karuk tradition and culture comes from second-hand knowledge granted to me from interviews and public information provided by the Karuk Tribe. Therefore, the knowledge

represented in this paper is from the understanding of an outsider, as directed by Karuk. As such, I am eternally grateful for the Tribe's acceptance of me as an outside researcher who wishes to learn from them. The Karuk believe in a concept of pikyav, which means, "to repair" or "to fix" allows Indigenous knowledge to have a place in academia in many different senses (Karuk Tribe Official Website). The Karuk believe that collaboration is of the utmost importance, and that ideology extended to me. As a student, I have time and ability to look at cases, such as the Karuk Tribe and wildfire management to see what greater good this example of natural resource management can have on other Indigenous Peoples. I do not take this lightly and I acknowledge that research with Native Americans is tenuous due to a dark legacy of unethical study on Indigenous Peoples for the exploitation of their knowledge. As a result, I made a deliberate effort to be sure my work has integrity and is only with and for, the Karuk Tribe. As I conducted my research, Leaf Hillman brought a very significant point to my attention with his assertion of "science as advocacy." I have determined that using science as avocation for social justice is a vital aspect of research that engages traditional knowledge and Indigenous peoples. It is time to change the rhetoric of Western science and allow for new perspectives from ancient knowledge and expertise to be included in best practices moving forward.

## **6 Results**

### **6.1 Science as Advocacy**

Leaf Hillman discussed his understanding of Western science today in my interview with him. He points out that the Karuk people are not opposed to science, they are confident, even that the science would eventually reflect and "catch up" to Karuk

knowledge in the Klamath region. The results of science today on both the Western and Indigenous sides, is showing the detrimental effect that the suppression of fire has had. A variety of different species have become endangered and the trees themselves have adapted to fireless landscape. Their bark thinned and their diameter reduced (Meisel, 2012). The results showing the impact of fire on the flora and fauna of the areas are showing that the Karuk Tribe was right all along and the management and prescription of fire helps forests to prosper. Research is focusing on the need for fire, as opposed to the possibility that fire could be dangerous. There is now a consensus on the need for management in order to reduce large wildfire risk (Price, 2011).

Karuk descendants are also taking scientific matters into their own hands. Several tribal members are combining western science with Karuk science and can communicate knowledge in both languages. Scientists like Ron Reed and Aja Conrad have used their traditional knowledge in the world of science (Norgaard, 2019). There is very little known in Western science that reflects how to practice prescribed fires, therefore, California federal institution are looking to the Indigenous People for guidance. The collaboration of Western science with Karuk science is acting as a form of advocacy for Karuk voice on fire.

## **6.2 Karuk Agencies and Management Plans and**

### **6.2.1 The Karuk Department of Natural Resources**

When Leaf Hillman, and several other Karuk descendants, sought to protect their home, their first thought was to protect the fish (Leaf Hillman Personal Communication, September 28<sup>th</sup>, 2019). They established a department of fisheries, but they quickly realized the need for a more wholesome protection of the ecosystem. To protect the fish,

they had to figure out how to manage fire, which helped expand the fisheries department into what it is today; the Karuk Department of Natural Resources (DNR). The department has evolved to have an extremely sophisticated structure.

*The Mission of the Karuk Department of Natural Resources is to protect, enhance, and restore the cultural/natural resources and ecological processes upon which Karuk people depend. Natural Resources staff incorporates traditional values, which ensures that the integrity of natural ecosystem processes*

DNR via Karuk Tribe Official Site, 2019

The department has three branches for water quality, watershed restoration, and eco-cultural revitalization (DNR via Karuk Tribe Official Site, 2019). Within this department, there is an emphasis on the Eco-Cultural Revitalization (ECR) projects, headed by Bill Tripp. The ECR is responsible for a variety of different management plans written and adapted by the Karuk Tribe (DNR via Karuk Tribe Official Site, 2019). This agency created an outlet to apply for funding and to work with universities and researchers, such as Dr. Kari Norgaard. Fire is central to a majority of the grants applied for and partnerships formed. “When people ask, what is your focus, what do you do at the department, I say fire. It is the most important thing that we do.” (Leaf Hillman, via Environmental Nation Official Site, 2017).

### **6.2.2 The Western Klamath Restoration Partnership**

The Karuk DNR and other partners created a partnership of federal agency Indigenous agency. It is known as the Western Klamath Restoration Partnership (WGRP). The WGRP is a nonprofit agency designed to target six areas of restoration. They look at fire regimes, cultural and community vitality, healthy river systems, fire-adapted communities, sustainable local economies, and a resilient, biodiverse ecosystem (WGRP network official site, 2019). The partnership “seeks to build trust and a shared

vision for restoring fire resilience at the landscape scale” which, as asserted in this paper, is central to the Karuk Tribe. Within the WKRK, there are over a dozen partners that contribute, including the California Department of Forestry and Fire Protection (CalFire). CalFire is an integral partner that comes with a variety of different funding opportunities for the projects born in the WKRK. The partnership with CalFire demonstrates how far the Karuk Tribe has come in their mission to restore fire to landscape. The organization that once suppressed fire is now in partnership with the Karuk in restoring fire.

### 6.2.3 Somes Bar Integrated Fire Management Plan

The Somes Bar Integrated Fire Management Project is one of three current restoration plans in the WKRK. Bill Tripp, Alex Watts-Tobin, who is the Tribal Historic

Preservation Officer and

Archaeologist for the Karuk Tribe

and Jennifer Dyer, who is the

Heritage Program Manager for Six

River National Forest designed and wrote the project (Tripp et al., 2017).

It intends to combine tribal fire

practices with the current fire danger

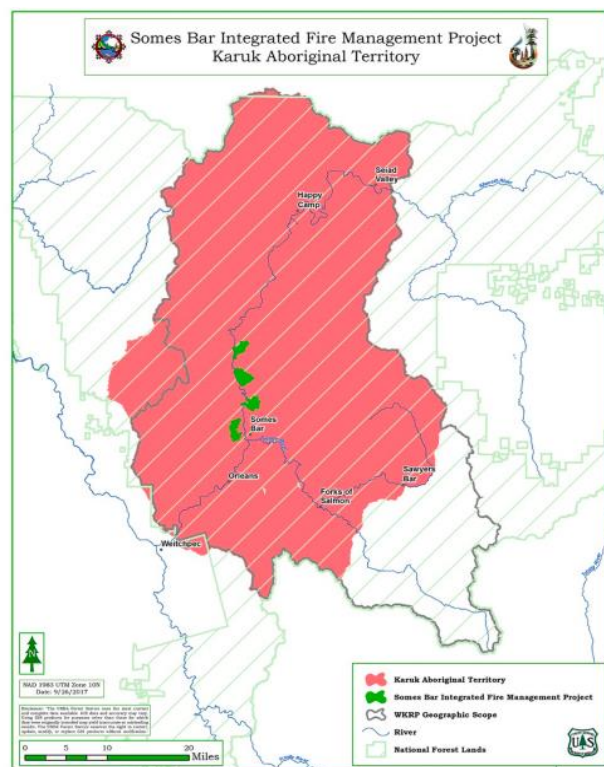
analysis and science (SBIFMP via

WKRK network official site, 2019).

The project promotes community

values, human safety, and culturally significant natural resource management. Compared

to the Karuk 1,661 owned acres, the Somes Bar works with 5,570 acres (Harling, 2014).



**Figure 4.** Courtesy of the Somes Bar IFMP document, 2018. Showing the entirety of Karuk aboriginal lands and the service area of the Somes Bar project.

This acreage is a much more significant percentage of their aboriginal territory, proving that fire management projects, like this one, can extend autonomy for tribal nations.

There is, of course, more acreage to defend, but the Karuk Tribe's reach is extending, as seen above. A Karuk spiritual leader and Cultural Biologist, Ron Reed calls this "story of how an impoverished northern California tribe challenged a massive Goliath—a huge private utility corporation" (Reed and Norgaard, 2010). Management plans, such as the Somes Bar have helped to provide funding and create the ability to fix what the US Forest Service broke when suppressing fire.

#### **6.2.4 Prescribed Fire Training Exchange (TRES)**

In order to gain true autonomy over ancestral lands, the Karuk People must be able to set the prescribed fires themselves. Human-ignited fires were once a federal offense and penalized accordingly. Therefore, requiring a certification to allow setting prescribed fires by Karuk citizens. The Klamath River Prescribed Fire Training (TRES) is a controlled burn training program designed to teach a variety of different people how to start and control burns. It is a country-wide initiative that is designed to find cooperative mitigation and management techniques for prescribed fire (Klamath River TRES, via Fire Learning Network, 2019). The initiative is specific to the Klamath area and is a grassroots project, linked to the WKRP discussed above (fire-adapted network official site). The exchange allows for not only more fire-adapted and prepared communities, but also the establishment of Karuk fire knowledge in a nationally recognized program (Karuk Tribe Official Site). The program began in the private and trust lands owned by the Karuk Tribe, but has increased its scope in the last 5 years. Its

reach in the Klamath River Basin and covers a more substantial portion of the Karuk aboriginal lands today (fire adapted network official site). The exchange additionally allows for non-native firefighters and communities to understand relevant prescribed fire regimes, while allowing Karuk intellectual knowledge to stay with the Karuk Tribe (Karuk Tribe). TREX offers an alternative to certifications such as a Red Card because it restores historical fire to the lands, thus decreasing the need for mass scale firefighting and dangerous scenarios with wildfire.

When the Klamath River TREX started in 2014, the prescribed burns were limited to Karuk privately owned land parcels, but within one year, their reach and scope have doubled. This year they trained 96 individuals from 25 different organizations, seven states, and two countries and burned 300 acres (Klamath River TREX, via Fire Learning Network, 2019).



Figure 5. Courtesy of the Inhabitant Film, 2019. Shows the function of fire in the Klamath Region. A prescribed, controlled fire, with minimal smoke and not a single crown flame in sight. This photo shows an alternative version to fire, one that has beauty.

The broad interest in the program showed that it is not just training Karuk people; there is an obvious need for something different within fire regimes. The interactions that a broader population is having with the Klamath River TREX are showing the success of prescribed fires. A director and teacher for TREX, Jeremy Bailey, has worked for all sorts of agencies relating to fire, from local nonprofits to California Forest and National Park Services. He states, "The Klamath TREX is the best solution to the wicked problem we face today, how to get community ownership of the problems of wildfire." (Jeremy Bailey via Terence). The acknowledgment of the TREX program from an individual who has seen the management plans in the National and States Parks/Forests shows that the state of California is ready to be more open-minded. Federal desperation has turned into a willingness to listen, which allows the Karuk Tribe to reconnect with lands that have historically been restricted and labeled under federal control.

## **7 Discussion**

### **7.1 Fire as Social Platform**

Only .00087% of Karuk aboriginal home is today trust lands. To regain the ability to make decisions on the remaining portions of their lands, especially those that are public lands, the Karuk Tribe's organized and sophisticated management tactics have made a difference. The Karuk people have, in the last five years, been able to restore cultural practice to the forests. One reason for this is timing. National and State parks are scrambling for a solution due to the considerable fire damage and increasing inability to control wildfires (Lake and Long 2018). The Camp Fire, which killed 85 people in California, is catalyzing change due to its fast and relentless burning (Wootson Jr. 2018).

The Camp Fire is not the first devastating fire of this nature, but its ferocity opened a fresh wound and created new dialogue on alternative ways to manage fire.

Devastating wildfires have acted as much more than a call for change in fire management. Karuk agencies regarding fire have also "aided and coincided with increases in political power, successful lawsuits, and scientific expertise." (Lake and Long 2018). The utilization of tribal resource management is holding up in court rulings, where tribal efforts for restoration of lands have prevailed (Lake and Long 2018). In 2018 the Western Oregon Tribal Fairness Act was passed by the U.S. House restored more than 17,000 acres of public land to the Cow Creek Band plus 15,000 acres to the Coos, Lower Umpqua and Siuslaw Tribes (Smith 2019). This Act passed after the Cow Creek Band had lobbied to Bureau of Land Management with academic and non-profit support as well as advocacy from multiple tribal governments (Smith 2019). The Act does not grant back all the lands lost, but it is proof of steps towards tribal respect and the enhancement of tribal self-determination for the three tribes who have regained lands (Brennan 2018). The Klamath area is reflecting this story with the collaboration of Yurok and Karuk as well as with Dr. Kari Norgaard, who worked with Bill Tripp, a Karuk Citizen, to create and university advocacy (Norgaard 2019).

## **7.2 Decolonizing Fire**

Long lasting change comes from much more than timing and court rulings, it must come from the restructuring of Western society. 'Decolonization' is surfacing in the academic community in reference to actions against a colonial rhetoric and aligning with minority populations. Human-ignited fires are against and the dominant colonial rhetoric of fire restriction, because they were restricted with colonialism in the United States. To

decolonize wildfire is to distinguish the difference between wildfire and prescribed fire and to integrate traditional knowledge into the mainstream. Wildfire, from a colonial perspective, is a dangerous entity and a natural disaster – a disaster met with military-style force. The reasons for this make perfect sense due to the history of the US military's involvement in the beginning of fire suppression and forest management (Pyne, 2015). Stephen Pyne calls this “militant enthusiasm” and it results in the first action taken towards fires is to fight. The concept of working with fires is an afterthought (Pyne, 2010, Pg. 162). In order to decolonize fire, the structure of the fire departments must flip to working with fires and fighting if necessary.

I assert that one significant way to deconstruct the institutions of fire is to choose alternative language regarding fire. Language is hugely impactful on the way that humans perceive the world and it can be a conduit for decolonization. In western fire agencies, words such as fire ‘fighting’ creates the perception of fire as the enemy. Propaganda fire further asserted that fire is a public enemy, as seen in figure 2. The Public must also change conversation and news, words such as ‘destructive’, ‘record-breaking’, ‘unprecedented’ often used when reporting on wildfires and this terminology is not also dangerous for perception, but a fallacy. An ‘unprecedented’ or ‘record-breaking’ fire places focus on the danger of the fire and not on the reasons for the fire itself. The words used to describe fire add to the fear of fire and a demand for suppression.

Moreover, the elimination of language in the Wilderness Act of 1964 is an additional step towards the recreation of public perception. To see our public lands as space removed from human influence is to misunderstand the need for human-ignition and Indigenous symbiotic relationship. Restructuring the Act and eliminating the

problematic terminology of 'untrammeled by man' and 'man himself is a visitor' is an important step toward the decolonization of the wilderness, as we have defined today (Wilderness Act 1964 amended copy via USDA official site, 2019). In summary, two elements must change in the current language of fire: the first is to eliminate militant language and the second is to change the view of the wilderness through language.

I offer third aspect alongside the importance of changing the language that is used in relationship to fire. An examination of the language used to describe Traditional Ecological Knowledge, fire and science today, is essential. In the context of this paper, I have used the phrase TEK and Traditional Knowledge interchangeably, due in part to a difference in the literature that holds commentary of both titles. Fulvio Mazzocchi draws attention to the use of 'traditional' in TEK, pointing out that traditional could mean maladaptive and continue the legacy of forgotten Indians (Mazzocchi, 2006). Therefore, in this paper the assertion of 'science,' albeit colonial roots, was intentional due to its widely acknowledged and accepted platform in western society. I also decided to use the word 'science' to discuss Karuk fire practice, based on the terminology that Leaf Hillman used when he discussed the Karuk view of Western science and their current use of science as advocacy (Leaf Hillman, Personal Communication, September 28th, 2019). Language is important on both sides of communication; to the public about fire and communication from Indigenous people to federal institutions. Recognizing this need for multilingual projects, the WKRP and the Karuk DNR have used intentional language to speak both to non-Native people and Karuk people. This is a first step to creating a wholly new and productive dialogue that can ultimately, help overcome long held

misconceptions and miscommunications and lay the groundwork for authentic discourse and change.

Equally as important to the use of language, is the removal of colonial propaganda. National Forests must remove the Smokey Bear campaign to make way for traditional knowledge and the positive impacts it will have on forests. Any success in the TREX program and the Somes Bar project will be tainted if a campaign is still alive calling for the removal of all human-ignited fires. Smokey advocated for a colonial perception of the way forests are supposed to look, ones without fire scars and ‘pristine’ environments. This misconception does not help the Karuk people to demand for non-Native support in the state of California, which is what they need to the financial support they must have to continue their management projects. Smokey and all that he represents, must no longer be the face of the US Forest service and protection of wilderness areas. Changing the message must be done completely by also changing the messenger. While I was travelling in between Karuk owned land and driving through the Klamath National Forest, I did not see a single sign that had Smokey Bear on it. Although there may have been a sign that I missed, the lack of the bear asserted a clear message, without the bear the Karuk people are free from outside influence over their lands and can express their own messaging about fire. The ability to reclaim autonomy over lands is only possible if supported by the non-Native public.

### **7.3 Co-Management**

A harsh, but known truth in Indigenous Communities is the little to no allocation of complete Tribal sovereignty, meaning outside influence and authority. The definition of co-management varies within academic discourse. For the purposes of this paper co-

management means to accept, encourage and engage a multitude of perspectives and practices within resource management. Co-management in the Klamath Mountains takes Karuk's TEK and weaves it into the dominant fire regimes. However, when approaching Karuk aboriginal lands with a co-management technique, it is vital to tread carefully. Co-management can easily become a means to slip back into the exploitation of Indigenous Knowledge. When I discussed co-management plans with Leaf Hillman, he acknowledged the history of exploitation, but pointed out that Karuk's connection with their lands is of the utmost importance and thus, co-management is necessary (Leaf Hillman, Personal Communication, September 28th, 2019). The Karuk Tribe has made it very clear that the cultural connection to their lands and the ability to start fires on their lands is protection to their people and spirit (Karuk Tribe Official Site, 2019). Co-Management will only work if both Western agency and Karuk knowledge are representing the same goals. Fortunately, scientific research is reflecting the need for fire in the Klamath "Western science is just beginning to understand why the Karuk have these traditions, ceremonies, and beliefs." (Dr. Frank Lake, via Inhabitant Film, 2019).

There are two aspects needed for co-management; the first and foremost is funding for prescribed fire projects and the second is a vast majority of Karuk aboriginal territory are public lands that are at the mercy of the federal government (Diver, 2016). The Karuk acknowledge their need for funding and assert that, "self-governance is about decision making by the Tribe over its own destiny through this transfer of federal funding to the Tribe, and decision making can be made without outside interference," (Karuk Tribe Official Site, 2019). In several interviews for news organizations around Northern California, Bill Tripp expressed his concern about the lack of funding for the

management projects and plans the Karuk need to do (Lohan, 2019). In her research, Kari Norgaard provides context "Indigenous people are disproportionately impacted by the changing climate as they lack the financial resources to build new infrastructure," (Kari Norgaard via Lohan, 2019). The ability to react to the changing climate and the increased fire danger this is a crucial concern and of the utmost importance when looking into the future of safety in the Klamath (Norgaard, 2014). Although the Karuk plans may in the long run be more cost effective, the initial training and resources will require financial aid to build their agencies. Co-management is, thus, a way a wider public can gain a better understanding as to what the Karuk Tribe is doing with fire in the Klamath. The cooperation of different organizations is creating more awareness and thus more funding, which is exactly what the Karuk need. Without co-management and the funding it creates, the Karuk cannot restore fire.

The second necessity for co-management is access to public lands. As discussed earlier in this paper, the federal government created the US Forest service, as an agent to reinforce the removal of fires, so to add fire to public space, is to change the entire foundation of the US Forest Service. By submitting plans that reflect a U.S. institutional structure, such as a step-by-step procedure, certifications for prescribed fire and scientific proof and backing of their validity, the Karuk Tribe essentially speaks the same language. This, however, does not mean to ignore the problematic institutional structure that is often forced upon Tribal Nations. To adhere to institutional structure is explicitly a compromise that maintains Tribal culture, while allowing representation to be recognized in the dominant socially constructed framework of resource management (Ranco et al, 2011). The Karuk Tribe's fire management plans balance on a line of both the US Forest

Services' protection of land and Karuk knowledge, tradition and culture. Often this is called co-management, which I assert is a temporary way to create an intersection of purpose and draw a parallel between worldviews (Diver, 2016). I also argue however, that this solution is temporary, because it does not lead to the Karuk tribal mission to its full realization to "expand Karuk Indian Country and manage our tribally owned property to its best use for the benefit of our members" (Scott Quinn, via Karuk Tribe Official Site, 2019). Though there is much more work to be done to fully realize this mission, cooperation leads at least to Karuk reconnection and reclaiming of identity, safety and food security among their lands.

#### **7.4 Fire as Karuk Tribal Sovereignty**

Throughout this paper, there have been four overarching categories: politics, perception, economics, and safety. The distinction of these categories is necessary when looking at tribal fire practice from a lens of sovereign rights. The Karuk people have addressed all four of these categories with first, adhering to the Western societal management plan format and making their perspective heard using science as advocacy. Moreover, they have used science as advocacy against forces that suppress fire for economic benefit, while also providing economy for those who allow the Karuk plan. Lastly, they have succeeded in creating tribal safety plans so that when the Klamath catches fire, the Karuk people can be resilient. The Karuk's situation as both a tribe on their ancestral home and as a nation without a designated reservation, makes their claim to sovereignty a difficult battle. The criminalization of fire has continued to reinforce the legacy of the "Indigenous other" (Lomawaima and McCarty, 2002). The "Indigenous other" is a hard perception to overcome, but the combination of co-management plans

that decriminalize prescriptive fire and academic awareness of Indigenous knowledge is helping to eradicate the ideology of the Indigenous other, and hopefully along with it, the ideology that fuels the quest to eliminate fire.

Dr. Kari Norgaard asks a question in the conclusion of her book, "What might happen if the non-Native settlers on this land began to listen to what Native people have been trying to say?" (Norgaard, 2019, p 226). Partnership within Karuk-run and lead management plans proves that the non-Native settlers are listening. The U.S. Forest Service is funding and promoting the Somes Bar IFMP on their website and to the state of California as an integral solution. The answer to Norgaard's question is the growing success of the Klamath River TREX program and the wide reach it has to so many different Natives and non-Natives around the United States. The TREX program and the US Forest Services financial support also answers Norgaard's question, in that Native people can finally begin to regain autonomy over their ancestral homes. The WKRP has an outreach to 4,000 plus more acreage than privately owned by the Karuk people (Harling, 2014). This is 4,000 acres of public lands that the Karuk people have gained decision-making power over through a deliberate process and effort. Both Karuk people and the lands will benefit from Karuk restoration of fire. With the clearing of undergrowth in the forest large wildfires become less likely. Their successes are already showing in the protection of the houses in the Happy Camp and Orleans, CA areas (Karuk Newsletter 2018, via Karuk Official Site).

While in the Klamath, my curiosity about fire management and danger led me to a discussion with a variety of Firefighting departments. I talked to two different fire departments. The first was Fort Jones Fire Department, with 13 firefighters, all of

European descent. The second was the Hoopa Fire Department, with an all Hoopa Citizen staff. The Hoopa Fire Department is the first federally recognized Native American fire department. When I asked about their current fire management regime, both Fort Jones and Hoopa acknowledged the current importance of prescribed fire. Hoopa mentioned the TREX program is allowing for the harder to reach communities the ability to protect themselves to fire (Chief Rod Mendes Personal Communication, August 25th, 2019). My research also found that the California Fire Science Consortium is beginning to place a significant emphasis on prescribed fire (California Fire Science Official Site, 2019). Karuk voice, even without knowing it, is reaching many fire agencies in Northern California. An emphasis on prescribed fire is progress and proof that co-management is taking root, not just in Karuk lands, but also in other communities outside the Karuk area.

Fire is also a way for the Karuk people to adapt to climate change. Climate change vulnerability is something than many Indigenous Peoples around the world are currently aware of and advocating to change. Indigenous Peoples have been on the front lines of climate justice and recently, at the UNESCO conference that took place on the 36th and 27th of November 2018 a platform was given several tribal leaders to discuss climate change (UNESCO Official Site, 2019). Climate change awareness, however, is still at direct odds with the interests of a market economy and a profit driven the United States. I assert that wildfire is an equalizer for opposing parties. Although fire history roots are set deep into colonialism, a benefit can be of interest to the State and to settlers in accepting the Indigenous practices of fire management. Millions of dollars each year are spent addressing wildfires. The Karuk's management plan is of the best interest to institutions that are looking to reduce spending in the long run and increase the safety of

citizens. The Karuk's management plan, specifically, is a way to create more safety for all Northern California residents.

I end with a note about the continuing work in California. Karuk Management plans are holding their part in the protection of federally instituted lands, but the work to continue to change practices and perceptions are more critical now than ever. The Bureau of Land Management is still reflecting a colonial view on fire, and when discussing California Fire, language such as "the best fire suppression efforts" and "attacking fires" is a further continuation of a colonial fire approach (Bureau of Land Management Official Site, 2019). The work to restore fire to the landscape, as a regenerative practice is just beginning, and the Karuk people are on the front lines working with fire, not only for safety, but also for sovereign rights of their home.

## **Acknowledgments**

First, I want to thank the Karuk Tribe for their willingness to work with University students. Their assertion of pikyav has allowed for Indigenous knowledge to have a place in academic community (Karuk Tribe). The Karuk believe that collaboration is of the utmost importance and that ideology was extended to me. Specifically, I want to thank Shay Bourque, who heads the higher education connection department as well as Leaf Hillman for taking time out of his busy schedule to discuss the complicated social dynamics of fire with me. Additionally, I want to thank Vikki Preston for quick correspondence and willingness to answer my questions. I also want to thank my advisor and mentor Joe Bryan, for helping me shape my mismatched thoughts about wildfire and Indigenous rights. Finally, I want to thank Dr. Kari Norgaard for her willingness to correspond with me about her inspirational work with the Karuk Tribe and her book

*Salmon and Acorn Feed Our People*, which served as a map of knowledge to me during my research.

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