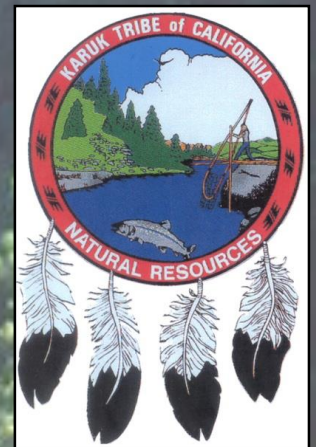


Can Climate Change Be A Strategic Opportunity?

Wildfires, Traditional Ecological Knowledge, and the Karuk Climate Assessment

May 10, 2017

Dr. Kari Marie Norgaard, University of Oregon





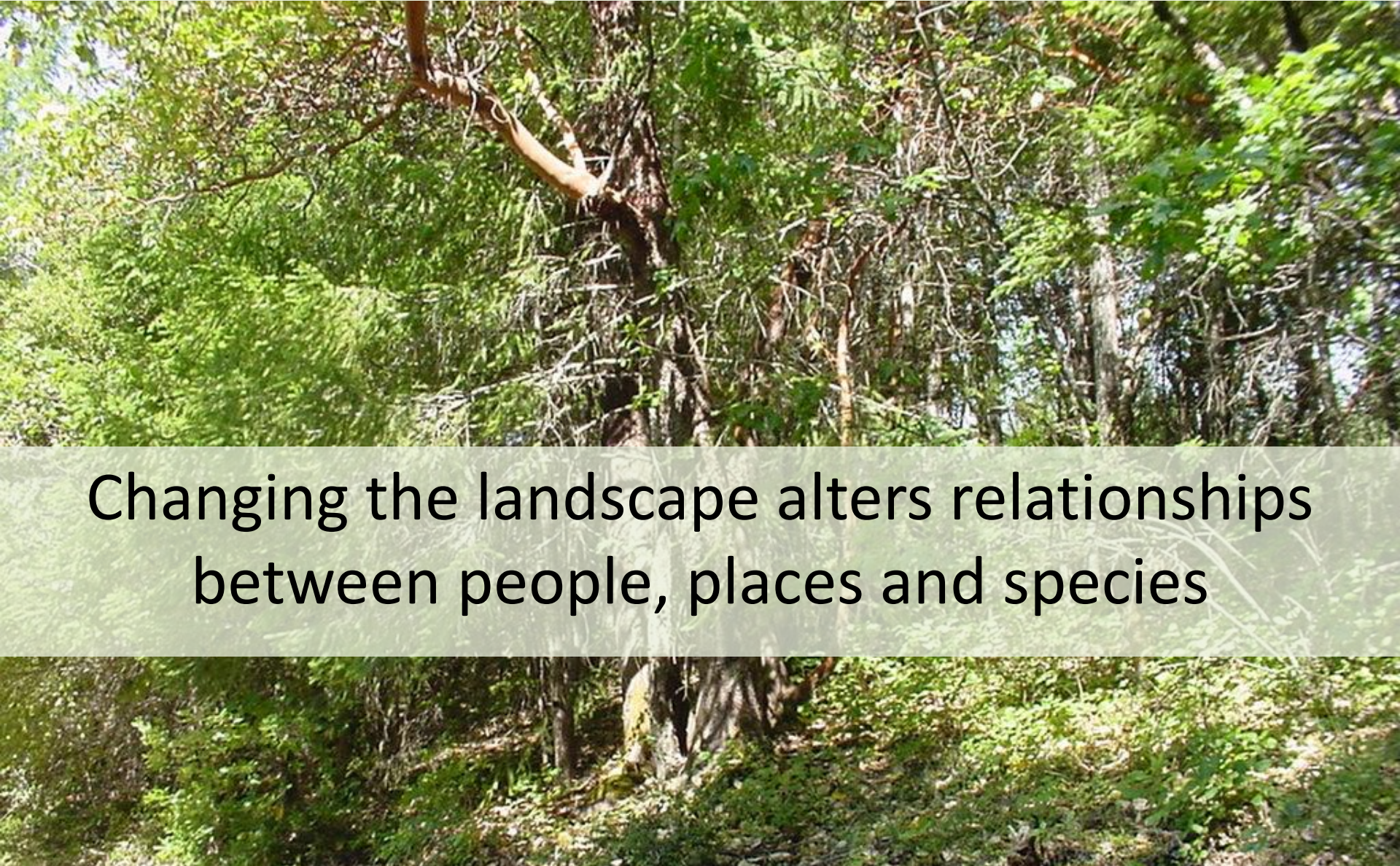
Traditionally, Karuk and other Tribes in this area use fire to manage the landscape. Traditional management practices prevent the build-up of fuels that could lead to catastrophic fire events as well as manage for healthy stands of acorn bearing oaks, forage for large ungulates, and for other foods, fibers, and medicinal plants.



Fire exclusion has led to radical ecological changes including high fuel loads, decreased habitat for large game (elk and deer), reduction in quantity and quality of acorns, and alteration of growth patterns of basketry materials (e.g. hazel and willow).



Landscape change as colonial violence



Changing the landscape alters relationships
between people, places and species

Political sovereignty, mental health,
spiritual, landscape health are all
connected



While there is interest in Tribal TEK and cooperation, paradoxically large scale impacts from climate change exempt from regulation, while potential solutions in the form of traditional management have regulatory barriers.



Present Moment:
How can climate change be a
strategic opportunity?





“We are trying to get back to an intact world. Climate change can be a vehicle for that because of the awareness it brings to so many about limitations in the current management practices. We believe there is genuine interest in Karuk perspectives about how to care for the land, we offer these explanations in the hopes that this is true.”

- Ron Reed, Karuk Tribe Fisheries Program



Indigenous Peoples and Climate Change:

Forefront of consequences and proactive actions at many levels . . .

Karuk Tribe Climate Vulnerability Assessment

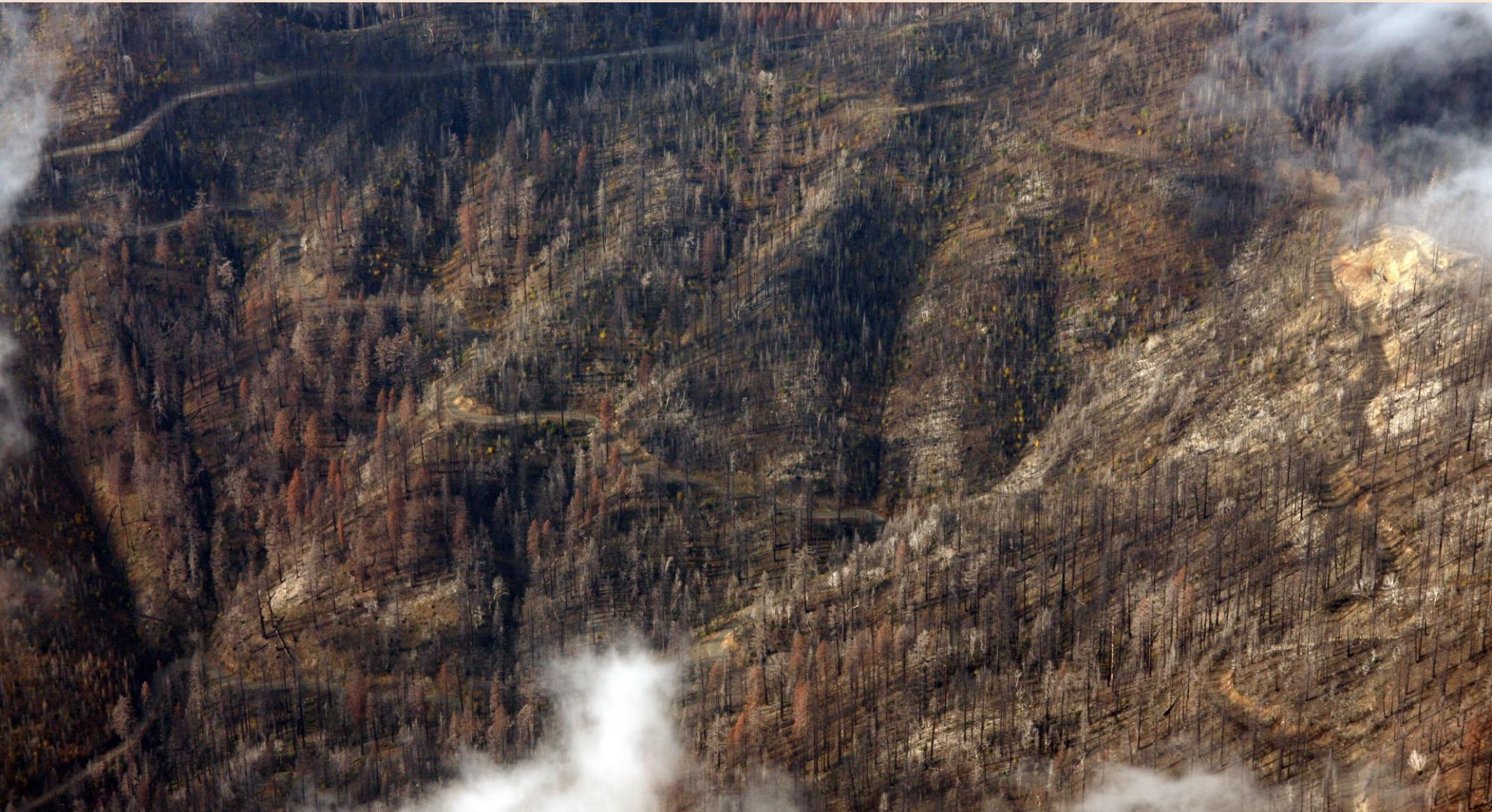


Multiple impacts to the region: focus on vulnerabilities from increased frequency of high severity fire within Karuk aboriginal territory.

Ongoing and future ecological outcomes of climate change in the Mid Klamath region of California include changes in precipitation patterns, increased droughts, increased frequency and severity of wildfires, pest outbreaks and more (Garfin et al 2014; Mote et al 2014; Voggesser et al 2013).



Taken together climate change and past management activities have created landscape conditions that could be completely devastating when large wildfire events occur.



Methodology

Vulnerabilities assessed at three scales:

- 1) Vulnerabilities to Karuk tribal traditional foods and cultural use species
- 2) Vulnerabilities to tribal program Infrastructure
- 3) Vulnerabilities to management authority and political status.

Vulnerabilities to Traditional Foods and Cultural Use Species

- 8 management zones, 21 species across these zones
- Vulnerabilities evaluated in an “intersectional” manner
- Climate change intersecting with past, present and potential future management actions of Tribe and other agencies

While these species
are adapted to cool,
low intensity fires,
high intensity burns
are potentially
lethal.



DIRECTION
108 deg(T)

41.30254°N
123.15789°W

ACCURACY 16 ft
DATUM WGS84

NF Salmon
sediment plume

7/6/15
5:59:15 PM



Photo: Scott Harding

On the Klamath increased risk of high intensity and severity fire in light of climate change is exacerbated from increased fuel loading due to fire exclusion, single resource management, industrial logging, and other interactive factors influencing fire behavior.



Fire fighting tactics themselves frequently put these species at risk



Threats to traditional use species

- Vulnerabilities to high intensity fire across time frames
 - During fire event
 - 2 years following wildfire
 - Long term vulnerabilities of fire
- Intersecting approach to climate change vulnerability and fire risks in management context
 - Prior management e.g. fire suppression, roads, logging, etc
 - Current management context e.g. firefighting activities
 - Future context, e.g. ‘salvage’ logging, other actions

Vulnerabilities to Traditional Foods and Cultural Use Species

- Different species of importance
- Humans as ecosystem components
- Kinds of relationships people have with species (as kin, spiritual, as food, subsistence economy)

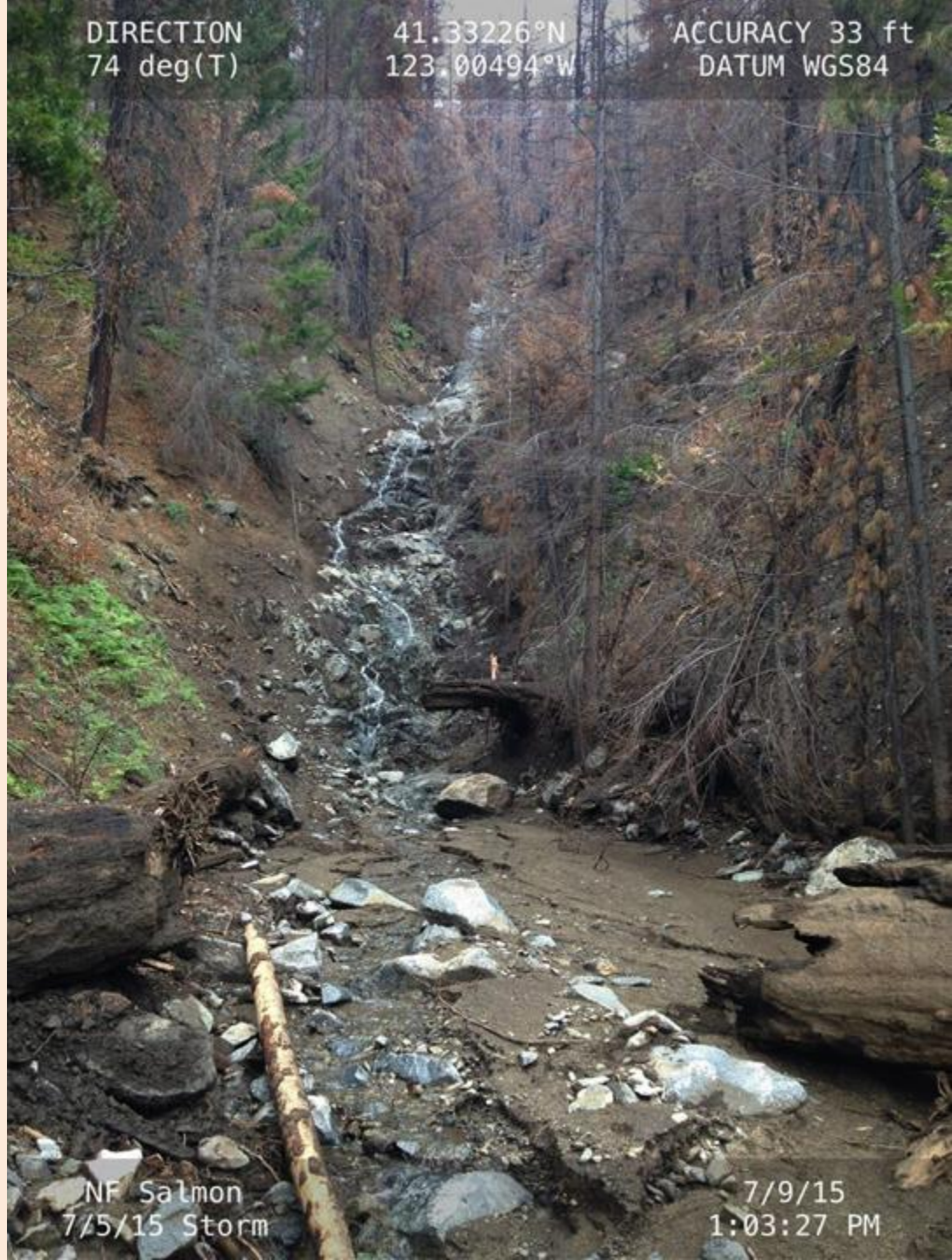


Vulnerabilities to Tribal Program Infrastructure

Managing for climate change requires long-term institutional capacity within the Tribe, yet climate change itself simultaneously holds the potential to undermine Tribal capacity.



Tribal capacity is needed to respond to high severity burns, and their associated emergency consequences and human health outcomes. High severity burns may be followed by flooding which in turns impacts community transportation, health, and safety.



DIRECTION
74 deg(T)

41.33226°N
123.00494°W

ACCURACY 33 ft
DATUM WGS84

NF Salmon
7/5/15 Storm

7/9/15
1:03:27 PM

Many consequences result from actions of other agencies

Actions taken by non-Tribal agencies during high intensity fires, from the dropping of retardant to the creation of fire lines often interfere with Karuk culture, values and management principles.



Impacts to Tribal Program Capacity at three scales

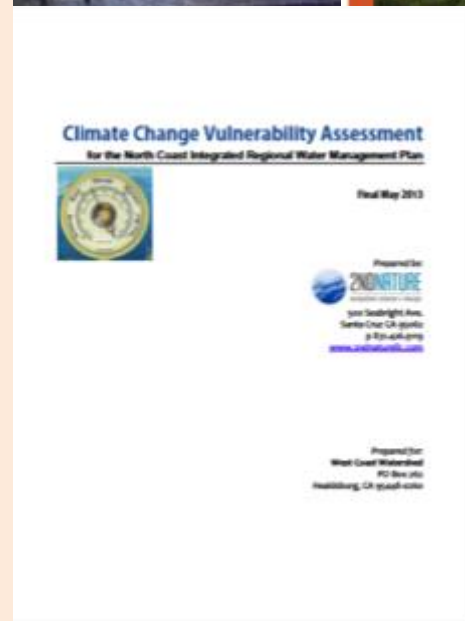
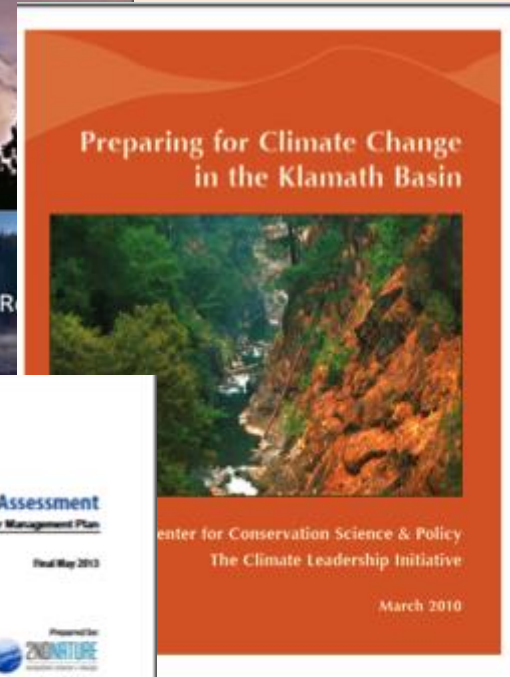
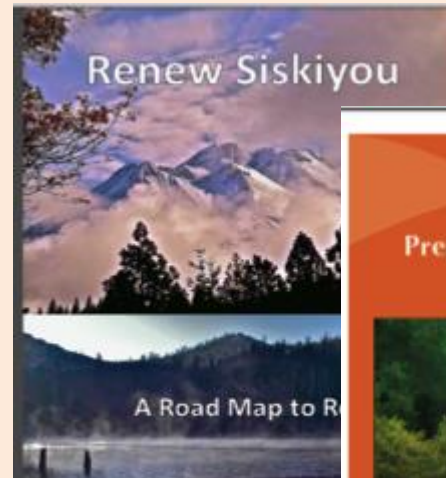
- During Fire Event
 - Transportation, health
 - Wildfire fighting activities take DNR staff away from other responsibilities
 - Activities of other agencies require time to engage
- Two Years After
 - Responding to health impacts
 - Responding to increased sediment
 - Aftermath of unfinished activities during fire
 - Fatigue and burn out for staff
 - Salvage, logging, road building
- Longer Term
 - Forest Plan Revisions

In the aftermath of large fires, actions by the Forest Service such as salvage logging not only puts species of importance to the Tribe at risk, require staff time to engage but further damages relationships across jurisdictions that are needed now more than ever.

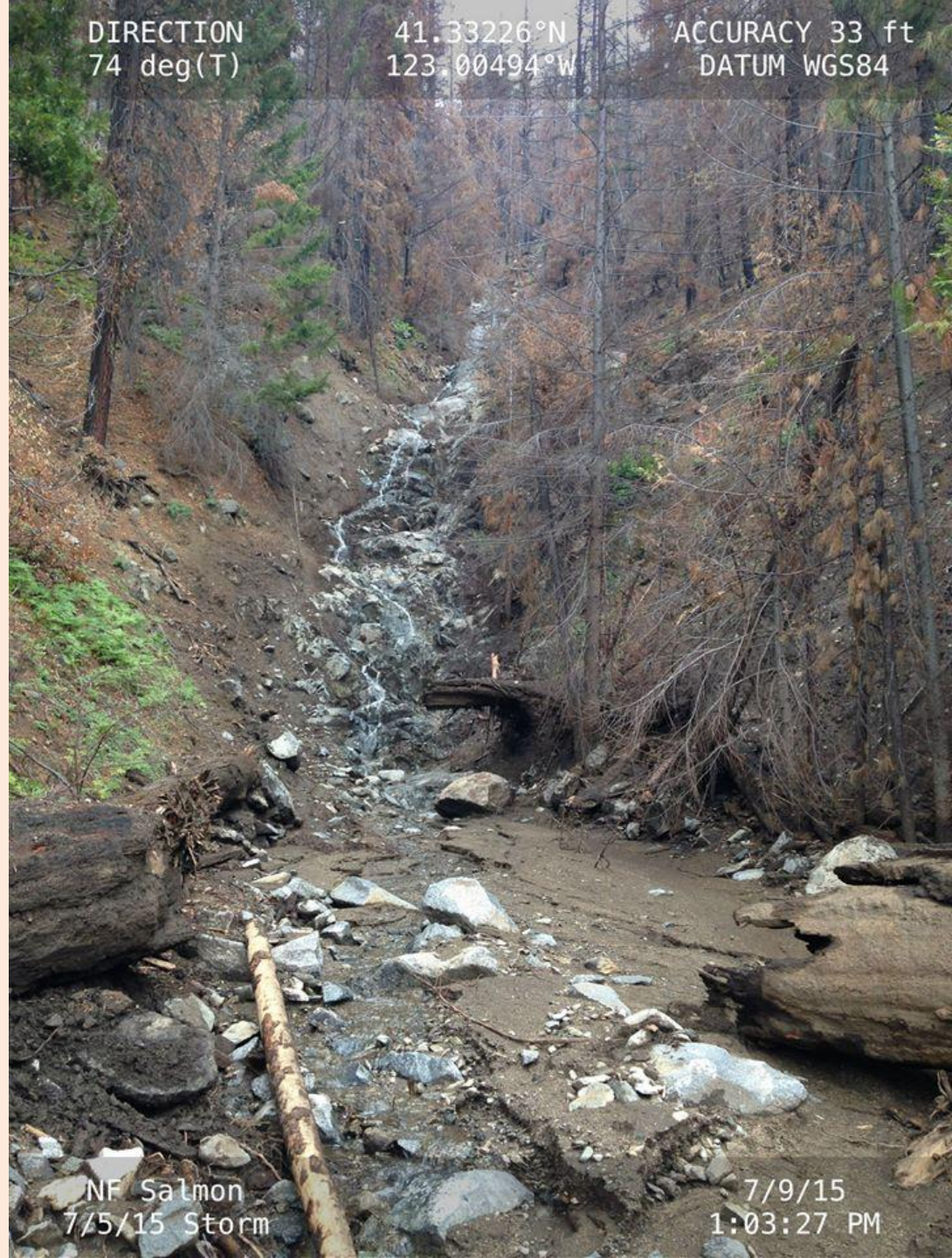


Climate Planning in Karuk Territory

- Other work not taking into account Tribal trust responsibilities, tribal needs and views, tribal species.
- These activities shaping direction of future land management. Can take things in positive or negative direction but takes time away from existing work to engage
- Urgency around climate change and creation of new narratives that shape future management directions (e.g. wildfire as bad, how to respond, etc)



Tribal capacity is needed to respond to high severity burns, and their associated emergency consequences and human health outcomes.



Vulnerabilities to management authority and political status

Karuk Tribe's
Aboriginal Territory
and land base is
within the National
Forest System -- lack
of recognized
ownership or
jurisdiction limits
Tribal ability to
establish and
maintain effective
Tribal programs



Climate change has the potential for negative impacts on Tribal sovereignty as cultural use species move, as landscapes and territories are altered, and because climate change is rapidly reshaping the legal landscape (Bennett et al 2014, Tsosie 2009, Wood 2009; Williams and Hardison 2013, Whyte 2013).



Vulnerabilities to management authority and political status

CONSTITUTION OF THE KARUK TRIBE

PREAMBLE

We the Karuk Tribe being a sovereign indigenous 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 preserve and restore our common bonds, tribal traditions and ancestral rights, and to secure for ourselves and our descendants the power to exercise the inherent rights of self-government, do hereby establish and adopt this Constitution.

ARTICLE I – ABORIGINAL TERRITORY, TRIBAL LANDS AND COUNCIL DISTRICTS

Section 1. Aboriginal Territory. The Aboriginal Territory of the Karuk Tribe is depicted in the map of the Karuk Aboriginal Territory on file in the Karuk Tribal Offices as described in Resolution 85, P. 12, and includes all submerged lands, and the beds, banks, and waters of all the

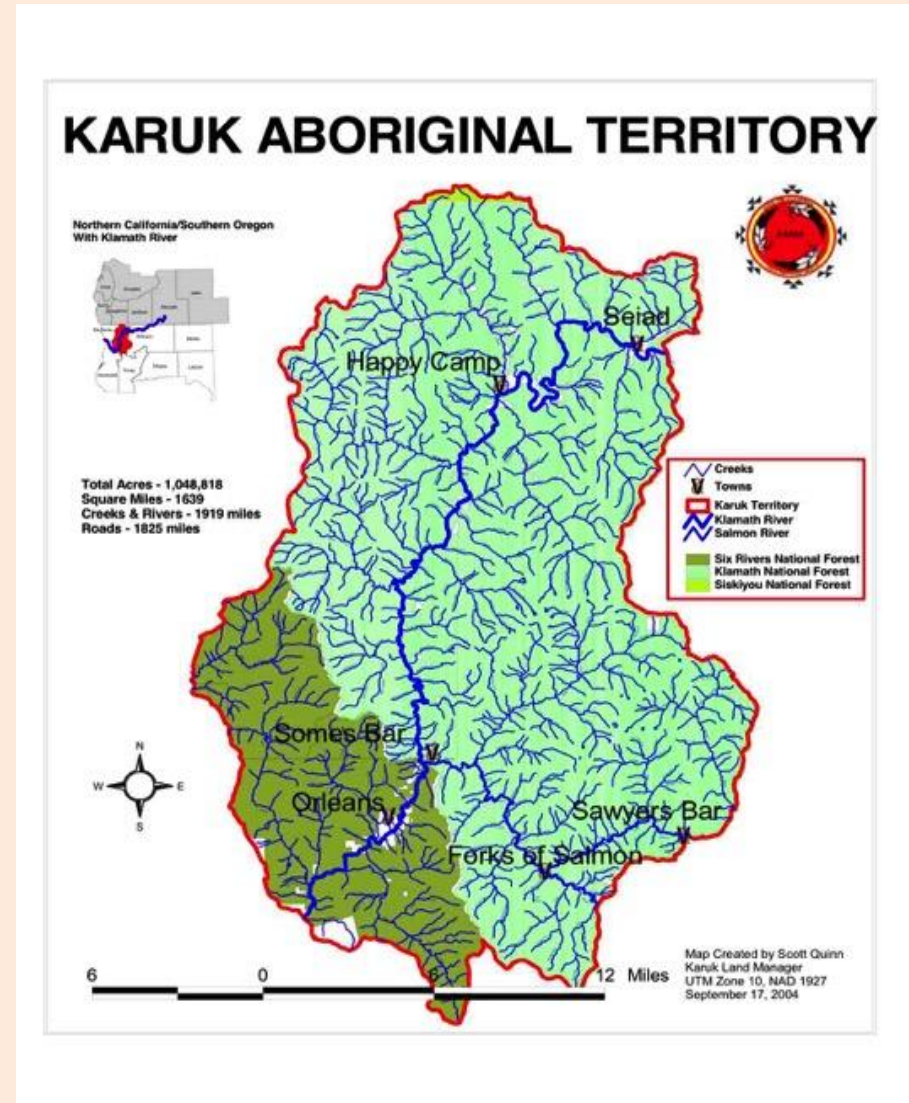
The laws of the Karuk Tribe shall extend to:

1. All Tribal members;
2. All persons who are eligible to be enrolled as Tribal members or descendent Tribal members with the Tribe, for the purposes of certain Tribal programs and Indian Child Welfare matters, wherever located;
3. All persons throughout and within Karuk Tribal Lands who consent to the Tribe's jurisdiction;
4. ***All activities throughout and within Karuk Tribal Lands, or outside of Karuk Tribal Lands if the activities have caused an adverse impact to the political integrity, economic security, resources or health and welfare of the Tribe and its members; and***
5. ***All lands, waters, natural resources, cultural resources, air space, minerals, fish, forests and other flora, wildlife, and other resources, and any interest therein, now or in the future, throughout and within the Tribe's territory.***

Karuk Ancestral Territory and Homelands

1.48 million acres

Karuk Tribe's Aboriginal Territory and land base is within the National Forest System -- lack of recognized ownership or jurisdiction limits Tribal ability to establish and maintain effective Tribal programs



Impacts to Tribal Sovereignty and Management Authority at three scales

During Fire Event

Fires framed as a crisis situation

Transportation and access restricted

Fire “fighting” activities such as back-burning, road building, retardant drops rarely support tribal values, perspectives

Two Years After

Crisis orientation to fire precipitates exemptions in existing regulations

Salvage logging, road building

Longer Term

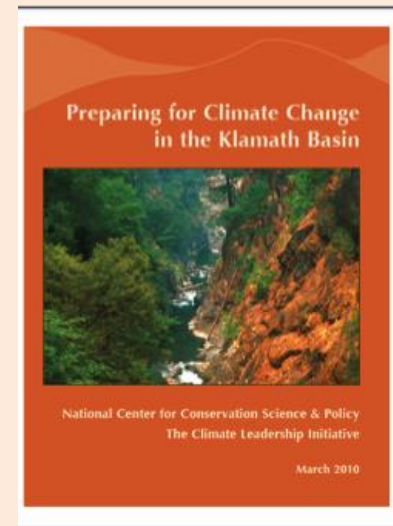
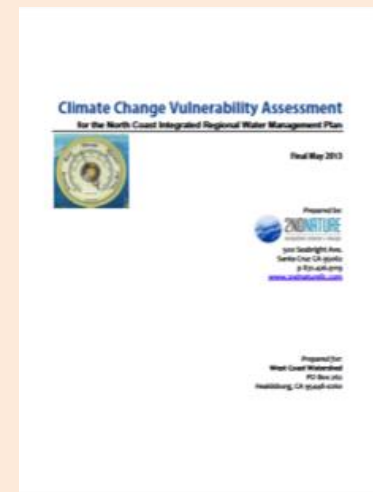
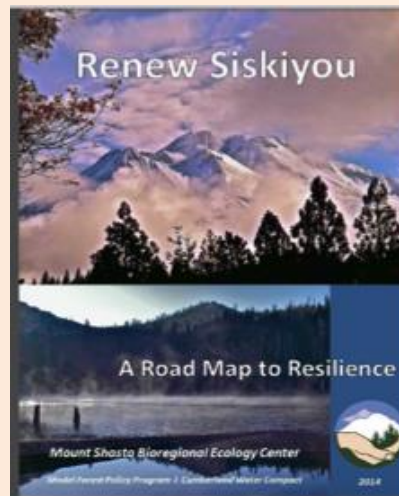
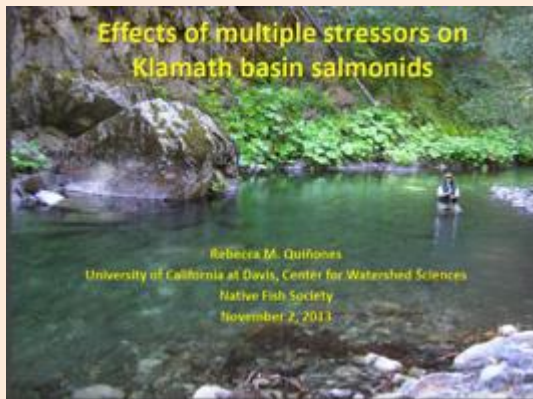
Discourse of fire as catastrophic impedes ability to use fire as a management tool

As more funding earmarked for fire suppression less is available for proactive fire management

Species movement and disappearance has implications for sovereignty

What will happen in Forest Plan Revisions?

Tribes face potential loss of acknowledgement of their jurisdiction if they are excluded from or cannot keep up with the multiple and rapidly changing dynamics between federal and local actors.

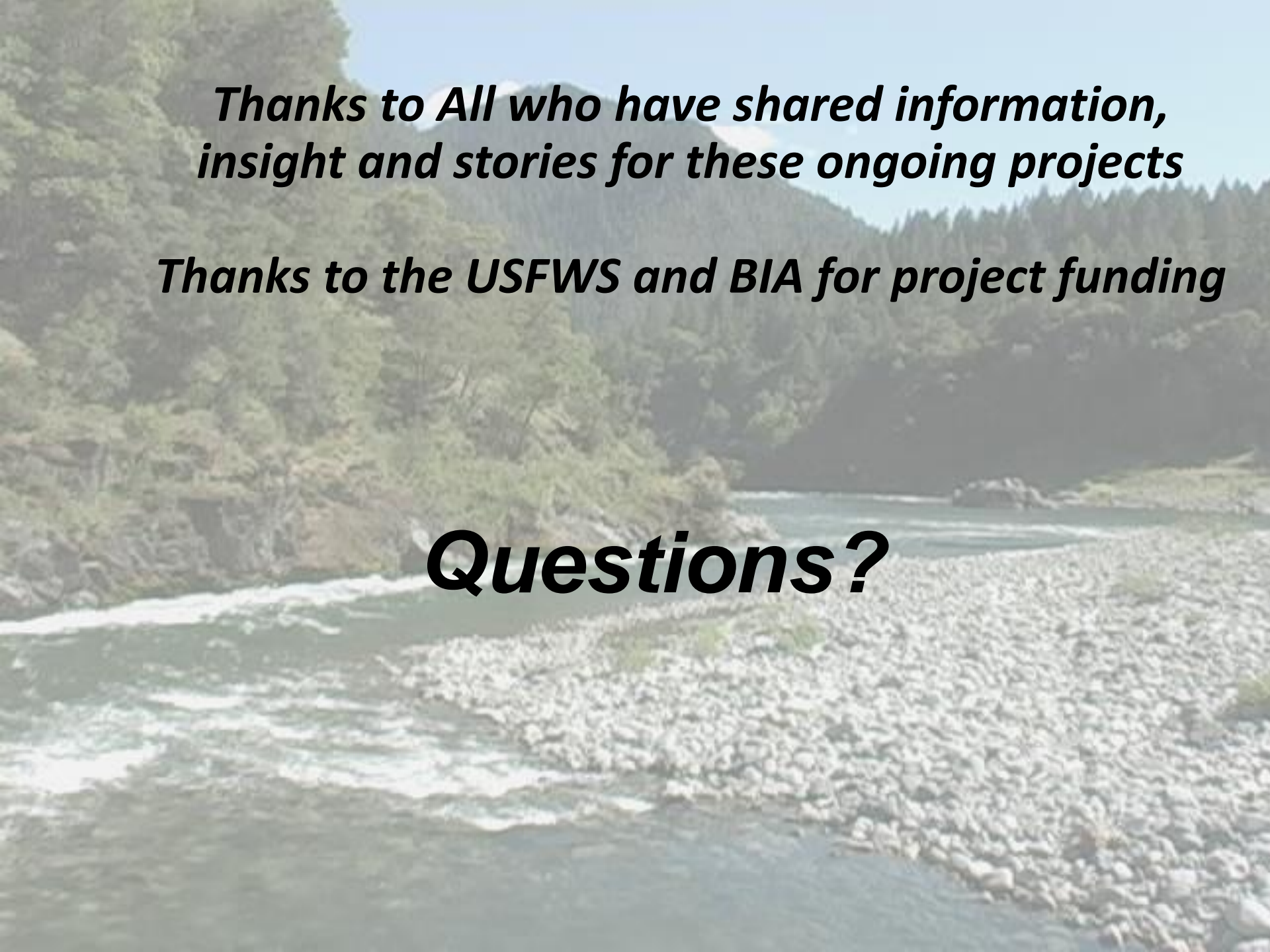


Using Climate Planning to Build Capacity

- Six Rivers National Forest, Forest Plan may be revised -- Karuk Tribe Climate Adaptation Plan could be integrated into Forest Plan revisions.
- Federal Lands Policy and Management Act Sec. 202. [43 U.S.C. 1712] (b); “In the development and revision of land use plans, the Secretary of Agriculture shall coordinate land use plans for lands in the National Forest System with the land use planning and management programs of and for Indian tribes by, among other things, considering the policies of approval tribal land resource management programs.”

Other Recent Karuk Tribe Climate Change Research Projects

- Norgaard, K. M. 2014. Social Impacts of Fire Exclusion *Humboldt Journal of Social Relations*, 39: 73-97
- Two Reports on Climate Change, Traditional Ecological Knowledge, and the need for knowledge sovereignty
 - Part I “Karuk Traditional Ecological Knowledge and the Need for Knowledge Sovereignty: Social, Cultural and Economic Impacts of Denied Access to Traditional Management.” 2013
 - Part II “Retaining Knowledge Sovereignty: Practical Steps Towards Expanding the Application of Karuk Traditional Knowledge in the Face of Climate Change” 2014

A scenic view of a river flowing through a forested valley with mountains in the background. The river is in the foreground, with white water rapids. The banks are covered in dense green forest. In the distance, there are mountains under a clear blue sky.

***Thanks to All who have shared information,
insight and stories for these ongoing projects***

Thanks to the USFWS and BIA for project funding

Questions?