

Four-Forest Restoration Initiative

Tribal Relations Specialist Report

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for:
Four Forest Restoration Initiative
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Introduction

The 4FRI project is situated across a landscape that is aboriginal to at least 16 American Indian Tribes. Many of these tribal aboriginal lands overlap one another and areas of prominence which are considered sacred by tribes here in the Southwestern United States. American Indian Law requires consultation between the U.S. Forest Service and federally recognized American Indian tribes; however, recognizing that we share a common interest to maintain the health of the forest consultation extends beyond the legal requirements. With the knowledge that American Indian people have inhabited the area of 4FRI for centuries, tribal consultation will consider traditional knowledge in order to restore and maintain a healthy forest ecosystem.

Policy

Tribal consultation is a critical step to meet our legal and fiduciary responsibilities to Tribes which have an interest in management and restoration of the lands affected by the 4 FRI.

The Tribal consultation process is guided by a variety of laws, Executive Orders, Memoranda and case law. Some of those laws include the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA) and subsequent amendments, Archaeological Resources Protection Act, American Indian Religious Freedom Act, National Environmental Policy Act, and the National Forest Management Act. Executive Order and Memoranda include Executive Order 13175--Consultation and Coordination with Indian Tribal Governments, E.O. 13007 Accommodation of Sacred Sites, and E.O. 12898 Environmental Justice, 2009 Presidential Memorandum on Tribal Consultation reaffirming E.O. 13175.

Restoration is guided by policy identified in a number of points in FSM 1500 and FSM 2000.

1563.03 – Policy

1. Maintain a government-to-government relationship with federally recognized Tribes.
5. Coordinate Forest Service land and resources management plans and actions with tribal land and resource management plans and actions to promote the health of ecosystems.
10. Consult with Tribes on matters that may affect tribal rights and interests ...

2020.3 – Policy

2. ...Develop goals and objectives within the framework defined by laws, Indian treaties, regulations, collaboratively developed public and Indian tribal values and desires, historical conditions, current and likely future ecological capabilities, a range of climate change predictions, the best available science, information, and technical and economic feasibility ...

Changes from Draft Environmental Impact Statement

The changes that occurred from DEIS to FEIS (see chapter 1) had minimal impacts to tribal relations, with the exception of analyzing a new alternative E. No comments included literature that could be categorized as “opposing science”.

Consultation Process

Consultation included the following Tribes:

Ak-chin, Ft. McDowell Yavapai, Gila River, Havasupai, Hopi, Hualapai, Kaibab Band of Paiute, Navajo Nation, Salt River Maricopa, San Carlos Apache, Tonto Apache, White Mountain Apache, Yavapai–Apache, Yavapai–Prescott, and Pueblo of Zuni.

Tribal Consultation is primarily direct face-to-face meetings between federally recognized tribes and the Federal government. Components of tribal consultation may include sharing of information through letter carried mail, email and follow-up telephone calls which supplement the face-to-face meetings. Tribes that do not participate in tribal consultation will continue to receive information via email and hand

delivered mail. Information will be shared unless a tribe asks specifically to not be informed. Table 1 is an up-to-date complete listing of information sharing and consultations with federally recognized tribes regarding 4FRI. Tribal consultation will be ongoing throughout the entire span of the 4FRI project.

Consultation Record

Table 1. Summary of Tribal Consultation.

Date	Tribe(s)	Type of Contact	Location
September 10, 2009	Havasupai, Hopi, Hualapai, Kaibab Band of Paiute Indians, Pueblo of Zuni, Navajo Nation, Yavapai-Prescott Indian Tribe.	The Kaibab Forest Supervisor sent an invitation to seven federally recognized Tribes to discuss 4FRI and other Forest projects.	N/A
September 28, 2009	Havasupai, Hopi, Hualapai, Kaibab Band of Paiute Indians, Pueblo of Zuni.	Initial Presentation on 4FRI during Kaibab Intertribal Meeting	Kaibab National Forest
May 5, 2010	Hopi, Pueblo of Zuni, Hualapai, Yavapai-Apache, and Navajo Nation and Yavapai-Prescott	emailed information on 4-FRI as an early “heads-up” on upcoming consultation.	N/A
June 29, 2010	Yavapai-Apache Nation Chairman and staff.	provided brief overview of 4-FRI	Yavapai-Apache Nation tribal offices, Camp Verde, AZ
July 14, 2010	Ft. McDowell Yavapai Nation	introduced 4-FRI to cultural department	Fort McDowell Yavapai Nation tribal offices, Fountain Hills, AZ
September 14, 2010	Hopi, Havasupai, Hualapai, Navajo Nation.	Introduction and presentation of 4-FRI to Tribes in attendance of intertribal meeting, presentation by H. Provencio	In the backdrop of the Schultz Fire landscape, Coconino County, AZ
December 7, 2010	Hopi	Presentation to Hopi; by Henry Provencio	Hopi Cultural Offices, Kykotsmovi, AZ
January 11, 2011	Hopi	Presentation on 4-FRI Heritage by D. Gifford	Hopi Cultural Offices, Kykotsmovi, AZ
January 18, 2011	Hopi, Navajo Nation, Yavapai-Prescott, Ft. McDowell Yavapai, Hualapai, Havasupai, White Mt Apache, Yavapai-Apache, and Pueblo of Zuni.	emailed information on Woody Biomass Program	N/A
January 27, 2011	Hopi, Navajo Nation, Hualapai, Pueblo of Zuni, Pueblo of Acoma, Yavapai-Prescott, Yavapai-Apache, Ft. McDowell Yavapai, Tonto Apache, White Mountain Apache, San Carlos Apache, Havasupai, emailed to Hopi, Navajo Nation, Yavapai-Prescott, Ft.	Mailed letters to Tribal leaders and emailed letter to subordinates	N/A

	McDowell Yavapai, Hualapai, Havasupai, White Mt Apache, Yavapai-Apache, and Pueblo of Zuni. ¹		
February 8, 2011	Havasupai, Hopi, Hualapai, Kaibab Band of Paiute Indians, Navajo Nation, Yavapai-Prescott Indian Tribe, and Pueblo of Pueblo of Zuni.	The Kaibab Forest Supervisor sent a letter to seven federally recognized Tribes with a copy of the SOPA and notification of the 4FRI Project	N/A
February 15, 2011	Yavapai-Prescott Indian Tribe	Kaibab provided update of 4FRI.	Yavapai-Prescott tribal offices, Prescott, AZ
February 16, 2011	Hualapai	Kaibab provided update of 4FRI.	Hualapai cultural offices, Peach Springs, AZ
February 23, 2011	Pueblo of Zuni	Kaibab provided update of 4FRI.	Zuni cultural offices, Zuni, NM
February 24, 2011	Navajo Nation	Kaibab provided update of 4FRI.	Navajo Historic Preservation Department, Window Rock, AZ
March 7, 2011	Havasupai Tribe	Presentation of 4FRI by H. Provencio and D. Fleishman	Coconino National Forest S.O. ^{2*1}
March 21, 2011	Hopi	Response to January 27 letter and supports site avoidance.	N/A
May 3, 2011	Hopi, Navajo Nation including Coppermine, Coalmine, Naness, Lechee, Leupp, Bodaway and Cameron Chapters, Hualapai, Pueblo of Zuni, Pueblo of Acoma, Yavapai-Prescott, Yavapai-Apache, Ft. McDowell	Letter for proposed locations for 39 material pits to provide cinders, gravel, and other aggregate materials for surfacing of unpaved roads and for maintenance purposes	N/A

¹ On January 28, 2011 the forests sent a consultation letter providing information and seeking involvement and comments to 20 Tribes and Tribe chapters including the Navajo Nation, Navajo Nation To’Nanees’Dizi Chapter, Navajo Nation Dilkon Chapter, Navajo Nation Tolani Lake Chapter, Navajo Nation Cameron Chapter, also Bodaway/Gap, Lechee, Leupp Chapters, Kaibab Band of Paiute Indians, San Juan Southern Paiute, White Mountain Apache, Yavapai-Apache Nation, San Carlos Apache, Hualapai Tribe, Yavapai-Prescott Indian Tribe, Havasupai Tribe, Tonto Apache, Pueblo of Zuni, Pueblo of Acoma, Hopi Tribe and Fort McDowell Yavapai Nation who all have historic ties and an interest in the Coconino and Kaibab NFs. Two written responses were received. The White Mountain Apache responded on February 17, 2011 and indicated no concern. A response from the Havasupai Tribe on March 7, 2011 asked for additional information on what the expected outcome of the proposals would be. As a follow-up, a meeting was held with the Havasupai Tribal Council and Tribal Elders on March 7, 2011 to discuss the analysis proposal. On June 6, 2011, a meeting was held with the Hopi to discuss heritage surveys.

² Staff discussed 4FRI project during the Sacred Sites Listening Session. Havasupai Tribe identified areas of concern. Tribe requested the following comments be documented. 1) High turnover of FS staff creates problems with site protection on long term projects. 2) Some tribal members are against thinning because all trees are important and provide life.

	Yavapai, Tonto Apache, White Mountain Apache, San Carlos Apache, Havasupai, emailed to Hopi, Navajo Nation, Yavapai-Prescott, Ft. McDowell Yavapai, Hualapai, Havasupai, White Mt Apache, Yavapai-Apache, Kaibab Band of Paiute, and Pueblo of Zuni.	for 4-FRI	
March 21, 2011	Hopi	Letter sent to Kaibab and Coconino regarding Heritage program procedures for 4-FRI.	N/A
March 23, 2011	Hopi	Kaibab staff provided update. ³	
May 3, 2011	Hopi, Navajo Nation including Coppermine, Coalmine, Naness, Lechee, Leupp, Bodaway and Cameron Chapters, Hualapai, Pueblo of Zuni, Pueblo of Acoma, Yavapai-Prescott, Yavapai-Apache, Ft. McDowell Yavapai, Tonto Apache, White Mountain Apache, San Carlos Apache, Havasupai, emailed to Hopi, Navajo Nation, Yavapai-Prescott, Ft. McDowell Yavapai, Hualapai, Havasupai, White Mt Apache, Yavapai-Apache, Kaibab Band of Paiute, and Pueblo of Zuni.	Letter for proposed locations for 39 material pits to provide cinders, gravel, and other aggregate materials for surfacing of unpaved roads and for maintenance purposes for 4-FRI	N/A
May 9, 2011	Havasupai, Hopi, Hualapai, Kaibab Band of Paiute Indians, Navajo Nation Yavapai-Prescott Indian Tribe, and Pueblo of Pueblo of Zuni.	The Kaibab Forest Supervisor sent a letter to seven federally recognized Tribes with a copy of the SOPA and notification of the 4FRI Mineral Pit Project	N/A
May 12, 2011	Hopi, Navajo Nation, Hualapai, Pueblo of Zuni, Pueblo of Acoma, Yavapai-Prescott, Yavapai-Apache, Ft. McDowell Yavapai, Tonto Apache, White Mountain Apache, San Carlos Apache, Havasupai, emailed to Hopi, Navajo Nation, Yavapai-Prescott, Ft. McDowell Yavapai, Hualapai, Havasupai, White Mt Apache, Yavapai-Apache, and Pueblo of Zuni.	Heritage Report sent	N/A
June 6, 2011	Hopi	Letter sent to Coconino regarding Heritage report on Survey discrepancies between Kaibab and Coconino.	N/A
June 22,	Hopi	Met to discuss Heritage survey	Hopi Cultural

³ Hopi Tribe would like to be involved in developing cultural resource sample surveys and request consultation on survey strategy.

2011		regarding their June 6, response letter.	Offices, Kykotsmovi, AZ
August 22, 2011	Navajo Nation Kaibab Band of Paiute Indians, White Mountain Apache, Yavapai-Apache Nation, San Carlos Apache, Hualapai Tribe, Yavapai-Prescott Indian Tribe, Havasupai, Tonto Apache, Pueblo of Pueblo of Zuni, Pueblo of Acoma, Hopi Tribe and Fort McDowell Yavapai Nation.	The second 4-FRI scoping letter was sent to 20 Tribal leaders. ⁴	N/A
February 19, 2012	Navajo Nation Coalmine Chapter.	Presentation on 4-FRI project areas	Coalmine Chapter Building, Navajo Nation
April 6, 2012	Navajo Nation Kaibab Band of Paiute Indians, White Mountain Apache, Yavapai-Apache Nation, San Carlos Apache, Hualapai Tribe, Yavapai-Prescott Indian Tribe, Havasupai, Tonto Apache, Pueblo of Pueblo of Zuni, Pueblo of Acoma, Hopi Tribe and Fort McDowell Yavapai Nation.	Tribes were sent a list of projects (including 4FRI) being analyzed under NEPA. ⁵	N/A
May 20, 2012	Navajo Nation Cameron Chapter	Presentation on 4-FRI project area, provided maps and brief discussion.	Cameron Chapter House, Cameron, AZ
September 19, 2012	Hopi	Kaibab Forest Supervisor provided update on 4FRI Reviewed process of phased consultation on specific Task Orders throughout life of project.	Hopi Cultural Offices, Kykotsmovi, AZ
September 20, 2012	Navajo Nation	Kaibab Forest Supervisor provided update on 4FRI Reviewed process of phased consultation on specific Task	Navajo Historic Preservation Department, Window Rock, AZ

⁴ On August 22, 2011 the second scoping letter was sent to 20 Tribal leaders including the Navajo Nation, Navajo Nation Coalmine Canyon Chapter, Navajo Nation Bodaway/Gap Chapter, Navajo Nation To’Naness’ Chapter, Navajo Nation Leupp Chapter, Navajo Nation Lechee Chapter, Coppermine Chapter, Navajo Nation Cameron Chapter, Kaibab Band of Paiute Indians, White Mountain Apache, Yavapai-Apache Nation, San Carlos Apache, Hualapai Tribe, Yavapai-Prescott Indian Tribe, Havasupai, Tonto Apache, Pueblo of Zuni, Pueblo of Acoma, Hopi Tribe and Fort McDowell Yavapai Nation. No additional comments were received. In summary, no Tribes identified specific concerns with the project or specific traditional cultural properties that would be affected by the proposed activities.

⁵ On April 6, 2012, all Tribes were sent a list of projects (including 4FRI) being analyzed under NEPA. On May 5, 2012, a meeting was held with the Hopi Tribal staff for the purposes of discussing ongoing consultation projects, including 4FRI. No follow-up assignments for the forests specifically addressed 4FRI.

		Orders throughout life of project.	
September 20, 2012	Pueblo of Zuni	Kaibab Forest Supervisor provided update on 4FRI Reviewed process of phased consultation on specific Task Orders throughout life of project.	Zuni cultural offices, Zuni, NM
October 4, 2012	Havasupai	Kaibab Forest Supervisor provided update on 4FRI to tribal council	Supai, AZ

During consultation the tribes have expressed concerns about the following:

- TCP's are at risk to catastrophic fire.
- Springs and plant collection areas are at risk to catastrophic fire.
- Overstocked stands are reducing the sunlight available for cultural and medicinal plants.
- Springs that are important to tribal ceremonies are drying up.
- A lack of low intensity fire is reducing regeneration of plant collection areas.

Contemporary Uses

The entire 4FRI project area is managed by the U.S. Forest Service and is aboriginal land to the consulting tribes. However with aboriginal ties to the land many tribal members also use the forest for traditional resources and ceremonies and to gather medicinal plants for other traditional and cultural purposes. Traditional gatherings and ceremonies are conducted throughout the forest and may or may not occur at the knowledge of the land manager. Additionally these activities may occur over the span of an hour, to several hours or several days. The Forests recognize the importance of maintaining these traditions to area tribes and will accommodate traditional use of Forest Service lands by American Indians provided it complies with existing laws and regulations. However, in an attempt to reduce the likelihood of conflicts between traditional tribal activities and operations related to 4FRI, consultation and coordination is a critical component between the tribes and the forests regarding the timing and locations of specific planned activities and operations.

Years of government-to-government consultation with federally recognized tribes have identified numerous traditional uses in or near the 4FRI project area. Examples of these uses include collection of forest products such as medicinal plants, tree boughs, ceremonial fuelwood, and piñon nuts (see Table 2), and ongoing use of ceremonial sites, shrines, and traditional gathering areas. Plant collecting is almost always conducted in more than one area in order to not deplete any particular plant species. In some cases, specific traditional use areas have been identified on the Forest through project-level consultation. However, it is assumed most traditional use areas have not yet been identified. While some traditional uses consistently occur in one location, others may occur in a variety of locations based on the availability of resources. Therefore, prior to initiating project-specific Task Orders, the Forests will consult with federally recognized tribes to identify traditional use areas and, if necessary, develop project-specific mitigation measures to accommodate traditional use of the Forest by tribal members.

Affected Environment

As discussed in the previous section, the 4FRI project area is limited to federal land managed by the U.S. Forest Service. Many portions of this land are also aboriginal to the consulting American Indian tribes. The archaeological resources in the 4FRI area demonstrate a high degree of traditional uses in the past which continue today (see Heritage section for more details concerning Archaeological Resources). In land inhabited by their ancestors, members of the consulting tribes continue traditions by hunting, collecting medicinal plants, conducting ceremonies and stewardship of the forest.

Restoration of the Ponderosa pine ecosystem is the primary focus of the 4FRI forest restoration project. American Indian resources may consist of shrines, trails and historic roads, and shelters such as sweat lodges and brush shelters. This also includes American Indian traditional use areas and places known as Traditional Cultural Properties/Places (TCPs). These TCPs are places traditionally used by cultural groups over generations.

These TCPs hold a central and important place in American Indian culture. Three prominent examples found within the project area are the San Francisco Peaks on the Coconino National Forest, Red Butte and Bill Williams Mountain on the Kaibab National Forest. Additionally, through years of tribal consultation the Forests have learned that natural springs are also considered TCPs by some tribes (see Appendix A for discussion about the management of the TCPs). When areas of the 4FRI project are selected for treatment, detailed maps of the area will be presented to tribes through on-going tribal consultation. This will be used to learn of any other sensitive areas of tribal importance that could be potentially impacted by 4FRI. Additionally, adjusting timing of treatment will coincide with seasonal plant gathering and ceremonial use.

Consistency with the Revised Kaibab National Forest Land and Resource Management Plan

The Revised Kaibab National Forest Land and Resource Management Plan (Revised KNF LRMP) became effective on April 6, 2014. Implementation of the Plan began on that date. It was therefore necessary to ensure that the proposed project was consistent with and conformed to the requirements of the Revised Plan, which includes desired conditions and management approaches for Tribal Relations. This section therefore addresses consistency with the Revised Kaibab National Forest Land and Resource Management Plan.

The 4FRI report is consistent with the Kaibab Plan in that it promotes a shared stewardship approach to land management. Desired Conditions for Traditional and Cultural Uses continue to be a goal for promoting the continued traditional and ceremonial use of the forest and its resources. See the Alternatives analysis below for discussion about the plan consistency per the individual alternatives.

Existing Condition

Tribal members make pilgrimages to the forest for ceremonial activities throughout the year. Springs in the 4FRI project area and throughout the forest are held as TCPs and or sacred sites. Many plants gathered for ceremonial use are collected on or near TCPs.

Through ongoing tribal consultation we have learned that;

- TCP's are at risk of high severity fire effects.
- Springs and plant collection areas are at risk of high severity fire effects.
- Overstocked stands are reducing the sunlight available for cultural and medicinal plants.
- Springs that are important to tribal ceremonies are drying up.
- A lack of low intensity fire is reducing regeneration of plant collection areas.

Table 2 shows a few of the forest products that are collected and their traditional uses;

Table 2. Some Forest Products and their traditional uses

Forest Product	Juniper boughs	Small Fir trees	Fir, pinyon, juniper boughs	Cat tails	Misc. poles	Green oak up to 6"	Ponderosa logs	Willow branches	Yucca
Use	Shade structures	Ceremony dances	Ceremony dances	Ceremony dances	Corrals, shades	Bows, Kiva ladder rungs	Traditional ceremonial structures	Basketry	Basket, soap

Wildfires producing high severity fire effects are a threat to all forest products; however, fire suppression in the forest has also caused damage in the form of preventing the healthy production of Juniper boughs, limiting the growth and production of small fir trees, and limiting the number of large ponderosa logs for ceremonial structures. Habitat for some native plants desired by tribal traditional collectors is disappearing and natural springs are drying up due to over stocked forests. Some of the affected plant collection areas and springs that were used historically and still have associated cultural values that are important to the tribes.

Desired Conditions

For a review of management plan direction for the Coconino and the Kaibab National Forests see Coconino and Kaibab Forest Plans Proposed and Existing located in the Heritage Specialist Report (Gifford 2011).

Forest leadership recognizes that all lands managed by the Forest were once tribal lands; Also that it will be desirable to ensure timber products are available to local American Indian tribes for subsistence and traditional purposes.

Forest botanical products can be collected from the forests for traditional tribal uses unless an area is restricted due to closures. Collection must occur in a manner that ensures the products collected persist on the Forest. Traditional tribal uses for forest botanical products, such as the collection of medicinal plants, wild plant foods, basketry materials, and fire wood, are facilitated.

Boughs and herbaceous plant parts used for American Indian traditional and ceremonial purposes are available under conditions and procedures that minimize restrictions, and are consistent with laws, regulations, and agreements with tribes. The Forest will continue to recognize the connections of tribal members whose aboriginal territories include the land now administered by the U.S. Forest Service and the importance of collecting forest products for traditional, ceremonial, and subsistence purposes, and the need to ensure that traditionally used resources are not depleted and are available for future generations.

The Forest will collaborate with affiliated groups on appropriate management of TCPs;

- Use temporary closure authority of Food, Conservation, and Energy Act of 2008 SEC8104 to accommodate traditional use of TCPs whenever practical
- Consultation should be conducted for all proposed special uses permits within TCPs
- The Forest should conduct ethnographic/ethnohistoric research to identify and evaluate TCPs
- Commercial development of TCPs are generally inconsistent with desired conditions
- Use Food, Conservation, and Energy Act of 2008 SEC 8106 to exempt confidential information from Freedom of Information Act requests
- Forest leadership recognizes that all lands managed by the Forest were once tribal lands

- Traditional uses such as the collection of medicinal plants and wild plant foods are recognized as important uses
- Traditionally used resources are not depleted and are available for future generations
- Tribal members have access to sacred sites for individual and group prayer and traditional ceremonies and rituals
- There are opportunities for solitude and privacy at ceremonial sites
- Important traditional use resources should be monitored to ensure healthy sustainable plant populations available for traditional uses
- Collaborate with tribal governments through nation-to-nation agreements, annual project consultations, formal and informal meetings, and other methods on the management of species important to maintaining the social and cultural well-being of tribes
- Traditional practitioners have access to Traditional Cultural Properties (TCPs) for ceremonial use and privacy to conduct ceremonies
- TCPs are preserved, protected, or restored for their cultural importance and are generally free from inappropriate impacts
- The significant visual qualities of TCPs are preserved consistent with the TCP designation
- Traditional use of TCPs by associated communities is accommodated by the Forest.
- Traditional use of TCPs important to maintaining the continuing cultural identity of associated communities will be accommodated and facilitated by the Forest
- Inappropriate development of TCPs will be minimized and controlled. The Forest will take an active role in educating the public on the importance of TCPs and issues related to their management while protecting confidential and/or sensitive information regarding TCPs
- The Forest will collaborate with affiliated groups on appropriate management of TCPs

Effects Analysis

Traditional Collecting Areas

We have learned through tribal consultation that tribal members collect forest products across the forest. Plant collecting is almost always conducted in more than one area in order to not deplete any particular plant species. Dense tree growth can have an effect to certain plant species and with the efforts of 4FRI thinning the forest may provide a better habitat for these plants to thrive.

Fire and ground disturbance can also enhance certain plant species such as wild tobacco.

Local tribal people could potentially use new roads developed as a result of 4FRI in order to access new collecting areas thus providing a more prolific diversification of certain plant species. Also, the demand for ground water by dense tree growth will be reduced through thinning and ultimately promote an increase in water flowing from springs and possibly restore springs that have dried up.

Smoke Impacts

Increases in prescribed fire in all action alternatives (B, C, D, and E) create the potential for increased smoke impacts.

- Most of the smoke from prescribed fire on the Coconino and Kaibab NFs would carry from the southwest to the northeast, potentially affecting the Havasupai Reservation and western portions of the Navajo Nation Reservation;
- Many people living in these areas are seniors with health conditions and are sensitive to smoke.

The effects of limited communications (they cannot get on a Web site to check out where we're burning, etc.), language barriers, or cultural differences make it difficult to get information to them and receive information in return about smoke impacts; and

- There is a general lack of smoke monitoring data on the reservations.

Therefore, those living on these reservations may be disproportionately impacted by smoke from the various agencies (especially from multiple fires on multiple jurisdictions). Table 3 shows the percentage of residents living in poverty.

Table 3. Percent of persons living in poverty.

	<i>Poverty Rate (%)</i>
<i>Coconino County</i>	25.9
<i>Maricopa County</i>	16.5
<i>Navajo County</i>	24.4
<i>Yavapai County</i>	19.2
<i>Arizona</i>	17.4
<i>United States</i>	15.3

Source: U.S. Census Bureau 2010, Table DP03

Coconino County has a significantly higher poverty rate than the other counties and the states of Arizona and Utah. The incidence of poverty in Coconino County is not evenly distributed among racial and ethnic groups. Approximately 50 percent of American Indian residents in Coconino County live in poverty. The high proportion of American Indian residents in the county, therefore, increases the poverty rate relative to other study area counties and the State (Eichman and Jaworski 2011).

Environmental Consequences

No Action Alternative (A)

Direct and Indirect Effects

Direct effects as a result of No Action will result in loss of native plant species increase of springs drying up and a greater threat to devastating wild fires. Also, with continued drying trends across the southwest the Forest will issue forest closures and fire restrictions thus effecting traditional uses and ceremonies.

TCPs are at risk to catastrophic fire because it can destroy the setting of the TCP. Springs and plant collection areas are at risk to catastrophic fire because of excessive runoff from monsoon rain washing in ash and debris in a fire devastated landscape. Overstocked stands are reducing the sunlight available for cultural and medicinal plants and catastrophic fire can destroy seed and habitat for native plants. A lack of low intensity fire is reducing regeneration of plants collected by native people.

Soil erosion due to uncharacteristic wildfires could have both a direct and indirect effect on traditional collecting areas. Rain and snow melt could cause channels to form, or mud slides from nearby slopes could deposit soil and debris over traditional areas leading to the loss of biological communities for both plant and animal species used by the tribes.

A “No Action” may result in the possible reduction over time of pre-settlement adapted native plants, some of which have been collected since historical times by American Indians for food and medicine. Additionally, springs and seeps are important locations to American Indians and other members of the public and increasingly overstocked forests may have some effect on those historic water sources.

The No Action Alternative (A) is not keeping with the Kaibab Forest Plan because the Plan proposes to promote a healthy Forest through thinning for fire prevention. This thinning will promote restoration of springs and reduce the risk of adversely effecting TCPs from catastrophic wildfires. P. The Plan proposes a more proactive approach to forest management and the No Action Alternative is not in compliance with the Plan.

Proposed Action Alternative (B)

Direct and Indirect Effects

Unnatural fuel loading should be reduced around National Register listed or eligible Heritage resources which are known to be of interest to the local tribes representing the “footprints of their ancestors.” Uncharacteristic fire behavior should also be reduced. Thinning and low intensity prescribed fires should reduce current fuel loads which would help to prevent extensive heat damage to traditional collection and gathering areas from future wildfires. There would be less need for fire suppression activities, consequently less of a threat from ground disturbing activities like bulldozer fire-line construction in areas.

Mechanical thinning treatments, temporary road construction and closures, and other ground disturbing activities associated with 4FRI have the potential to affect traditional collecting and gathering, and ceremonial areas and TCPs. Prescribed burning also has the potential to affect fire sensitive areas. Initial reduction of heavy fuels may lead to an increase in understory plant growth. Possible road decommissioning can also assist in limiting access to some sensitive tribal areas such as shrines and traditional gathering areas thus minimizing post burn visibility and visitation issues at those sites (for further discussion, refer to the Heritage section).

Project implementation may impact some American Indian uses as tribal members commonly access

forest lands for ceremonial activities and to gather forest products. Access concerns can be addressed through on-going consultations between the forests and American Indian groups.

Proposed Action Alternative (B) is in compliance with the Coconino and Kaibab Forest Plan because it promotes management of the Forest by reducing the fuel load of the forest. This may help to restore and support the continued health of resources important to the tribes. Tribal consultation will be imperative in the timing of proposed thinning so it does not conflict with tribal ceremonial use of the forest.

Alternative (C)

Direct and Indirect Effects

This alternative is focused on preserving an undisclosed numbers of trees 16” in diameter and larger. It is more of a socio-political concern to contemporary culture rather than an impact “footprints” of the ancestors of today’s tribal groups. Many of the ground disturbing activities associated with this alternative are similar to those identified in Alternative B, and have the same potential to affect traditional collecting and gathering, and ceremonial areas, and TCPs. Key components of this alternative include additional mechanical and prescribed burning on specific grasslands; wildlife and watershed research and restoration as related to the Large Tree Retention Strategy (LTRS) identified by the 4FRI partnership.

One concern for traditional collecting and gathering, and ceremonial areas and TCPs under this alternative is the increases in mechanical treatments. If additional high impact or intense mechanical treatments are needed under this alternative, additional tribal consultation would be necessary (See Heritage section for additional information).

Alternative (C) is in compliance with the Coconino and Kaibab Forest Plan because it promotes management of the Forest by reducing the fuel load of the forest resulting in the restoration of resources used by the tribes. Tribal consultation will be imperative in the timing of proposed thinning so it does not conflict with tribal ceremonial use of the forest.

Alternative (D)

Direct and Indirect Effects

Alternative D focuses on reducing prescribed burning by over 50 percent across the project in comparison to the proposed action (B). The alternative was developed in response to social concerns regarding smoke impacts in and around the area. Actions under Alternative D are similar to those found in the proposed action (Alternative B) with the principle difference being decreases in levels of prescribed burning and other options to remove thinning debris. This option would lower the effects of smoke on tribal communities. Potential impacts to traditional collecting and gathering, and ceremonial areas and TCPs are similar to Alternative B.

Proposed Action Alternative (D) is in compliance with the Coconino and Kaibab Forest Plan because it promotes management of the Forest by reducing the fuel load of the forest thus resulting in restoration of resources used by the tribes. Tribal consultation will be imperative in the timing of proposed thinning so it does not conflict with tribal ceremonial use of the forest. Additionally smoke will be less of an impact to tribal communities with this alternative.

Alternative (E)

Direct and Indirect Effects

This alternative is similar to alternative C in the amount of proposed mechanical and burn treatment areas. Also in that it adds acres of grassland treatments on the Kaibab NF and incorporates wildlife and watershed research on both forests. It proposes mechanically treating up to 9-inch dbh in 18 MSO PACs and includes low-severity prescribed fire within 70 MSO PACs, excluding 54 core areas. No forest plan amendments are proposed.

As in alternative C, the primary concern will be the increase in areas proposed for mechanical treatment. A potential benefit of this alternative is the preservation of culturally modified trees. This alternative will leave large numbers of 9 inch and above trees in place, thus may preserve some of these culturally modified trees. Conversely, one negative aspect of leaving large trees in place was noted during the bark beetle infestation on the Coconino National Forest. During that period a number of larger ponderosa pines died in drier parts of the forest.

Alternative (E) is in compliance with the Coconino and Kaibab Forest Plan because it promotes management of the Forest by reducing the fuel load of the forest resulting in the restoration of resources used by the tribes. Tribal consultation will be imperative in the timing of proposed mechanical treatment so it does not conflict with tribal ceremonial use of the forest.

Cumulative Effects

No Action Alternative (A)

Increased fuel load will result in larger wildfires and the loss of stable slopes will result in increased erosion. This erosion will impact areas where plants grow for traditional use. Prominent landmarks identified as TCPs could be severely impacted if a wildfire burned through these areas. Springs would continue to dry up or be polluted by excessive runoff by flash flooding as a result of rain in burned slopes.

Proposed Action Alternative (B)

Alternative B has the potential to increase the amount of ground-disturbing activities, including mechanical treatments, temporary road construction, skidding, stream restoration, fence construction and other ground disturbing activities. When considered together with the past present and foreseeable future actions, these activities have the potential to affect cultural resources such as traditional collecting, gathering and ceremonial use areas and TCPs. All undertakings that have the potential to affect cultural resources will go through tribal consultation. In addition, protection measures such as the possibility of tribal monitors during mechanical activities, keeping ground disturbing activities out of sensitive areas by flagging and avoiding the sensitive areas, and post prescribed burn monitoring to assess the effects of the low intensity burns, will help to minimize the effects. The potential cumulative effects to cultural resources and TCPs such as springs from increased ground disturbing activities and prescribed burning resulting from this alternative are therefore not considered to be adverse.

The cumulative effect of increased visibility is not considered to be adverse.

The cumulative effects on TCPs, gathering and ceremonial areas resulting from any potential increase in erosion are also minimal. Reducing fuel loads and implementing low to moderate intensity prescribed fires does not cause soil sterilization or hydrophobic soils as high intensity wildfires do. Low intensity prescribed fires leave some vegetation in place and re-vegetation occurs soon afterwards if soils are not sterilized. However, as implementation occurs, monitors would check for erosion concerns by examining culturally sensitive locations like TCPs and ceremonial sites in the project areas, including focusing on slopes, drainages, and other high probability areas with cultural resources present. The cumulative effects to cultural resources caused by an increase in erosion are not considered to be adverse.

Alternative (C)

The addition of the large tree implementation plan would have little additional effect on cultural resources, TCPs and gathering and collecting areas. However, an increase in prescribed burning, as well as similar actions identified under Alternative B, such as mechanical treatments, prescribed burning, stream restoration and fence construction have the potential to affect these resources. These issues are identified under the Cumulative Effects section under Alternative B and not repeated here. As noted previously, all undertakings that have the potential to affect cultural resources will go through tribal consultation. An increase in these types of activities will not result in an adverse effect to cultural resources as long as tribal consultation is conducted prior to project implementation, protection measures are imposed and post project implementation monitoring is conducted when appropriate.

Alternative (D)

As with Alternatives B and C, similar increases in activities under Alternative D such as mechanical treatments and ground disturbances can add to the effects on cultural resources. Additionally, specific to this alternative, is a reduction in prescribed burning which may involve other means of slash and debris removal. Actions such as chipping, shredding and mastication as well as removal of material off-site may include an increase in ground disturbing actions. As noted above, all undertakings that have the potential

to affect cultural resources will not have an adverse effect if the measures identified above are implemented. . Overall, the cumulative effects on cultural resources as a result of Alternative D are not considered to be adverse.

Alternative (E)

As with Alternatives B and C, similar increases in activities under Alternative E such as mechanical treatments and ground disturbances can add to the effects to tribal use of the land. The addition of the large tree implementation plan would have little additional effect on cultural resources, TCPs and gathering and collecting areas Also in that it adds acres of grassland treatments on the Kaibab National Forest and incorporates wildlife and watershed research on both forests. Actions such as chipping, shredding and mastication as well as removal of material off-site may include an increase in ground disturbing actions. As noted above, on both the Kaibab and the Coconino National Forests all of the undertakings that have the potential to affect TCPs will go through the Section 106 process and all effects to TCP resources that are listed on the National Register or eligible for the Register will be avoided. Overall, the cumulative effects on cultural resources as a result of Alternative E are not considered to be adverse.

Table 4. Heritage resources and Tribal Relations Mitigation for the 4FRI Coconino and Kaibab NF Restoration Project.

Design Criteria No.	Description	Purpose		Comment or Purpose
		Forest Plan Compliance	Specialist Recommendation	
Heritage Resources and Tribal Relations				
HR/TR-1	The forest would comply with the National Historic Preservation Act (NHPA) for all ground disturbing undertakings. Effects to cultural resources would be determined in consultation with the State Historic Preservation Office (SHPO) and other consulting parties. Potential effects would be addressed through site avoidance strategies and implementing the site protection measures listed in the Southwest Region Programmatic Agreement (PA), appendix J and in the 4FRI heritage strategy and section 106 clearance report.	X		Regulatory requirement , Compliance with NHPA and Southwest Region PA with AZ SHPO.
HR/TR-2	Consult with Native Americans in compliance with NHPA, AIRFA, EO 13007, EO 13175, and other applicable Executive Orders and legislation, particularly when projects and activities are planned in sites or areas of known religious or cultural significance.	X		Regulatory requirement , Compliance with NHPA and Southwest Region PA with AZ SHPO.
HR/TR-3	Project undertakings would be inventoried for cultural resources and areas of Native American religious and cultural use.	X		Regulatory requirement , Compliance with NHPA and Southwest Region PA with AZ SHPO.
HR/TR-4	Eligible , or potentially eligible , cultural resources would be managed to achieve a “No Effect” or "No Adverse Effect" determination whenever possible, in consultation with the SHPO and ACHP (36 CFR 800).	X		Regulatory requirement, Compliance with NHPA and Southwest Region PA with AZ SHPO.
HR/TR-5	Monitoring during and after project implementation would occur to document site protection and condition. Also see HR/TR-10	X		Forest plan compliance.
HR/TR-6	See Recreation/Scenery #3: Road, Skid Trail and Landing Construction: (a) Utilize dust abatement methods during haul of logs on the following roads shown in the	X		Forest plan compliance.

Design Criteria No.	Description	Purpose		Comment or Purpose																																				
		Forest Plan Compliance	Specialist Recommendation																																					
	<p>table during the season when dust is likely and funding is available. Coordinate with Coconino County on the application and timing of application of dust abatement on road segments that have County Maintenance responsibilities:</p> <table border="1"> <thead> <tr> <th>Road Number</th> <th>Beginning Milepost</th> <th>Ending Milepost</th> <th>Segment Length</th> </tr> </thead> <tbody> <tr> <td>556</td> <td>0.734</td> <td>1.245</td> <td>0.511</td> </tr> <tr> <td>418</td> <td>0.004</td> <td>1.004</td> <td>1</td> </tr> <tr> <td>418</td> <td>1.697</td> <td>2.372</td> <td>0.675</td> </tr> <tr> <td>0716B</td> <td>0</td> <td>0.76</td> <td>0.76</td> </tr> <tr> <td>140</td> <td>5.657</td> <td>6.158</td> <td>0.501</td> </tr> <tr> <td>141</td> <td>3.134</td> <td>3.431</td> <td>0.297</td> </tr> <tr> <td>141</td> <td>14.303</td> <td>14.963</td> <td>0.66</td> </tr> <tr> <td>141</td> <td>31.487</td> <td>33.968</td> <td>2.481</td> </tr> </tbody> </table> <p>(b) Where new temporary roads and skid trails meet a primary travel route, they should intersect at a right angle, then curve after the junction, to minimize the length of route seen from the primary travel route,</p> <p>(c) Log landings, temporary roads, and skid trails should be minimized within sensitive viewsheds,</p> <p>(d) Highest emphasis would be placed on foreground (up to 300 feet) of developed recreation sites, private homes or communities, and concern level 1 roads (paved roads and passenger car level roads) and trails, especially those designated as national scenic, historic or recreation trails,</p> <p>(e) GPS the log landings for post-treatment consideration for parking or dispersed camping,</p> <p>Recreation and Scenery #5: Fire Control Lines: (1) Generally restore control lines to a near undisturbed condition in the foregrounds (within 300 feet) of sensitive roads, trails, and developed recreation sites, (2) To hasten recovery and help eliminate unauthorized motorized and non-motorized use of control lines in these areas, use measures such as recontouring, pulling slash and rocks across the line, and disguising entrances, (3) Do not use motorized equipment on National Scenic, Historic and Recreation Trails, or other forest</p>	Road Number	Beginning Milepost	Ending Milepost	Segment Length	556	0.734	1.245	0.511	418	0.004	1.004	1	418	1.697	2.372	0.675	0716B	0	0.76	0.76	140	5.657	6.158	0.501	141	3.134	3.431	0.297	141	14.303	14.963	0.66	141	31.487	33.968	2.481			
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Design Criteria No.	Description	Purpose		Comment or Purpose
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	system trails if these are used for control lines. Coordinate with the District Recreation Staff regarding use of National Trails as control lines.			
HR-TR-7	<p>(f) Log landings, skid trails, and temporary roads would be rehabilitated including restoring proper drainage and reseeded as needed with native species,</p> <p>(g) To hasten recovery and help eliminate unauthorized motorized and non-motorized use of skid trails and temporary roads, use physical measures such as re-contouring, pulling slash and rocks across the line, placing cull logs perpendicular to the route, and disguising entrances,</p> <p>(h) Avoid using FS designated trails as skid trails or for temporary roads,</p> <p>(i) National Scenic, Historic, and Recreation Trails as well as forest system trails (motorized and non-motorized) would not be used for temporary roads or skid trails. It is acceptable to make perpendicular trail crossings. The locations of crossings would be designated. Trail crossings would be restored to pre-project condition after use.</p> <p>(j) Crossing of the Arizona Trail would be done sparingly and only if no other alternative exists. These crossing locations would be coordinated with District Recreation Staff.</p> <p>(k) Large, upright trail cairns used on Beale Wagon Road and Overland Trail must be protected. Locate cairns ahead of time. Logging operations would not damage the cairns.</p>	X		
HR-TR-8	When areas are selected for treatment, detailed maps of the area would be presented to tribes through on-going tribal consultation to determine if other sensitive areas of tribal importance could be potentially impacted.	X		
HR-TR-9	Treatment timing would be adjusted to coincide with seasonal plant gathering and ceremonial use.	X		
HR-TR-10	Fire Ecology #5: Fireline construction may consist of removing woody and/or herbaceous vegetation, removing surface fuels, pruning, or cutting breaks in fuels by hand, ATV (drag lines), or a dozer as needed, (2) Fireline width would be determined as adjacent fuels and expected fire behavior dictate, as well as compliance with the requirements of cultural, wildlife, and other resource areas, (3) Constructed firelines would be rehabilitated, which may include pulling removed material back into the lines, hand constructing water diversion channels and/or water bars, laying shrubs or woody debris in the lines following burning, or other methods appropriate to the site	X		Facilitate broadcast burns or pile burning operations.

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