FEDERAL LAND MANAGEMENT AGENCIES AND CALIFORNIA INDIANS: A PROPOSAL TO PROTECT NATIVE PLANT SPECIES

BY
Michelle L. LeBeau*

I. INTRODUCTION

Culturally and linguistically, pre-contact Native Californians were one of the most diverse groups of Peoples on Earth. A conservative estimate places their number at 150,000–200,000, comprised of hundreds of individual nations, bands and villages.[1] Their languages numbered over one hundred, derived from five or more language families, several of which are considered linguistic isolates.[2]

Socially, California Indians were as diverse as their languages. Due to the diversity of California's geography and natural resources, each tribe's lifestyle evolved out of a long and close interaction with, and an astute observation of, their environment. Their material cultures—including tools, utensils, shelter and clothing—were molded by their individual ecosystems. Each tribe created ornaments and religious items that were unique to themselves. Traditional monetary systems were structured around the values placed on the natural world. Native Californian basketry is among the finest in the world.

Today, California Indians keep their tribal existence alive by practicing many of the cultural traditions of their ancestors. They hold ceremonies and dances, they gather traditional foods, basketry continues as a fine art—and the complex and dynamic nature of tribal existence in California continues.

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* *Michelle L. LeBeau is a 3L at King Hall. She completed a double major in Anthropology and Native American Studies at the University of California, Davis, in 1993.*

[1] *See, e.g.*, ROBERT F. HEIZER, LANGUAGES, TERRITORIES, AND NAMES OF CALIFORNIA INDIAN TRIBES (1966).

[2] *See* LEANNE HINTON, FLUTES OF FIRE: ESSAYS ON CALIFORNIA INDIAN LANGUAGES 2-3 (1994).

However, California Indians face unique problems in maintaining their tribal cultures due to the loss of their ancestral land base.[3] Many California Indians moved to lands promised to be set aside as reservations. Later, when Congress failed to ratify the treaties, non-Indians were able to lay claim to both the traditional Indian homelands and to the "reserved" lands.

The California Land Claims Act of March 3, 1851 ("Act"), required every person claiming lands in California by virtue of any right or title derived from the Spanish or Mexican government to present their claims within two years. But the tribes—unaware that Congress had failed to ratify the eighteen tribal treaties—did not move to protect their aboriginal title. Most tribes were not notified of the Act's existence, or of its implications. Both the State of California and the federal government neglected to file claim on the tribes' behalf. The notion eventually prevailed that the State's failure to appear before the special claims board on behalf of the tribes nullified the tribes' claims and brought their lands into the public domain.[4]

Thus, California tribes lost their legal interest in both their aboriginal lands and the lands reserved by treaty. Instead, they were left homeless, dispersed and starving. To remedy this situation, beginning in 1906, Congress made appropriations almost yearly to acquire land for California Indians. Approximately 82 small reservations or rancherias were established under the land acquisition program. Today, there are 104 federally recognized tribes who have tribal trust lands, along with tribal members who have individual trust allotments.

The current landbase of California's Native Peoples consists only of remnants of their vast ancestral territories. There are only three large reservations in California,[5] the remainder being islands of Indian Country and checkerboards of trust allotments in the public domain.

In most cases, tribal lands are in rural areas, close to or sometimes entirely surrounded by federal lands. Many areas owned and managed by federal agen-

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[3] Between March 19, 1851, and January 7, 1852, three U.S. treaty commissioners entered into 18 treaty agreements with 139 California Indian signatories. The treaties would have established an Indian land base of approximately 8.5 million acres in California. However, in the face of objections from California's legislature and business interests, the U.S. Senate refused to ratify the treaties. Because the Senate also sealed the file on these treaties, the tribes were not notified of the rejection until 1905. *See* Edward Castillo, *The Impact of Euro-Americans on California Indians*, in HANDBOOK OF CALIFORNIA INDIANS 120 (Robert Heizer, ed., 1976).

[4] *See* B. Flushman and J. Barbieri, *Aboriginal Title: The Special Case of California*, 17 PAC. L.J. 391, 406-08 (1986).

[5] The Hoopa Indian Reservation, the Tule River Reservation and the Round Valley Reservation.

cies were previously used by particular tribes, bands, or families for traditional activities. Access to these areas for gathering of traditional foods, plants and other resources is vitally important to California Indian cultural practitioners and to the survival of tribal religions—and even to the survival of the plants themselves.

II. TRADITIONAL INDIAN LAND MANAGEMENT PRACTICES

Traditional gathering of plants for food, medicine, basketry, and making dance regalia for religious ceremonies continues to this day throughout California. The act of gathering foods and plants is a religious practice developed over thousands of years, and is based on a reciprocal relationship between plants and humans. It is conducted with great care and reverence for the natural world.

> When you gather, you always pray for the plant and the land. And when you're praying for the plant and the land, you kind of make a deal with it, saying that it's going to live on, and that one day it will be a beautiful basket. Then, when you take it home you will have that agreement, so that helps you clean it and do it right.[6]

In addition to being a spiritual act integral to Native cultures, gathering physically benefits the affected plant populations. Ecologists are now beginning to recognize the great impact that Native Peoples had upon the California landscape.[7] Through techniques such as controlled burning, pruning, digging, irrigating and annual harvesting, California Indians shaped the natural world around them. The result was vast oak groves with bountiful acorns; wide, grassy plains where native seed plants provided a great food source; and gathering areas where roots for basket making were easily accessible.

Fire was their most important management tool—employed to clear brush, maintain grasslands and meadows, improve browse for deer, enhance production of basketry and cordage materials, modify understory species composition in forests, and reduce fuel accumulation that might otherwise sustain intense fires.[8] Considering the large population of California Indians prior to European

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[6] Judith Dides, *"The Law of the Land" adaptation from interview of Josie Lewis*, NEWS FROM NATIVE CAL., Fall 1992, at 5.

[7] *See* KAT ANDERSON, BEFORE THE WILDERNESS: ENVIRONMENTAL MANAGEMENT BY NATIVE CALIFORNIANS 15-25 (1993).

[8] *Id.*

contact, the environmental consequences of aboriginal land use and management practices were substantial.[9]

California Indian land management practices are ecologically sound and even necessary for maintaining the delicate ecosystems across the State.[10] A recent study by a noted ecologist states that there is currently an ecological "vacuum," or disequilibrium, resulting from the lack of maintenance by California Indians.[11] The recent decline in species diversity is but one "symptom" of this disequilibrium.[12] Many rare or endangered plants are currently listed due to recent changes in land use practices of federal agencies, rather than as a result of climatic changes or Indian over-exploitation.[13] Reinstating Native land-use principles is one way to revive native plant species and "natural" ecosystems.

California's landscape at the time of contact was a vast garden, not a "wilderness" as historians, and ecologists, have led most to believe. The horticultural practices used by California Indians to cultivate this natural garden were a form of "wild plant management."[14] In this context, wild plant management is "the human manipulation of native plants, plant populations, and habitats, in accordance with ecological principles and concepts, that effects a change in plant abundance, diversity, growth, longevity, yield, and quality to meet cultural needs."[15] Hopefully, as ecologists begin to accept this principle, they can influence a shift in current federal land management policies to accommodate and encourage beneficial California Indian cultural uses of their ancestral lands.

III. Current Federal Land Management Policies Relating to California Indian Gathering

A. The Legal Framework for Aboriginal Gathering Rights

There are four major federal land and resource management agencies in California: National Park Service (NPS), Bureau of Land Management (BLM),

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[9] M.K. Anderson and Michael Moratto, *Native American Land-Use Practices and Ecological Impacts, in* 2 Sierra Nevada Ecosystem Project: Final Report to Congress 187 (1996).
[10] *Id.*
[11] *Id.*
[12] *Id.*
[13] *See* Anderson, *supra* note 7, at 171.
[14] *Id.* at 193.
[15] *Id.*

United States Forest Service (USFS), and Fish and Wildlife Service (FWS). While the "big four" have policies regarding land use and management, only the NPS has official *regulations* which affect gathering by California Indians.[16] The USFS *policies* on gathering are critical to California Indian cultural survival, but they are not finalized in official regulations. The BLM's multiple use policy allows for a wide range of uses by California Indians, but there is no official gathering policy. Finally, FWS policies are not generally relevant to gathering native plants, with the exception of FWS involvement when a plant is listed as endangered.[17]

Regardless of the federal regulations, California Indians still gather from public lands plants and plant parts which are necessary for ceremonial regalia, basketry, and medicinal purposes. Indians have advanced several legal theories in support of their right to aboriginal uses: the right to freely practice their religion under the First Amendment, the authority of the American Indian Religious Freedom Act (AIRFA),[18] the National Historic Preservation Act (NHPA),[19] and, lastly, the trust relationship between the tribes and federal government.[20] Unfortunately, none of these legal theories grant the definitive right to gather plants for food, medicinal use, or other cultural purposes.

Indian claimants have sought First Amendment protection against government impairment of their religious practices, but recent First Amendment

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[16] Letter from Steve Nicola, Land-Use Coordinator, California Indian Basketweavers Association 1 (Nov. 15, 1996) (on file with the author).

[17] *See infra* notes 35-36, 71-81 and accompanying text.

[18] 42 U.S.C. § 1996 (1994). AIRFA vests no substantive rights in American Indians; it only requires consideration of effects of public lands development on Indian religion. *See* Walter E. Stern and Lynn H. Slade, *Effects of Historic and Cultural Resources and Indian Religious Freedom on Public Lands Development: A Practical Primer*, 35 NAT. RESOURCES J. 133, 178 (1995) (discussing Lyng v. Northwest Indian Cemetery Protection Association, 485 U.S. 439 (1988)). *Lyng* and its progeny suggest that procedural rights, which would require agencies to consider impacts on traditional religion, will have to be asserted under NEPA or other land management or planning statutes. *See* Stern and Slade, *supra*.

[19] 16 U.S.C.A. §§ 470 to 470w-6 (West 1985 & Supp. 1998). The purpose the NHPA is the preservation of historic resources. Congress amended the NHPA in 1992 to provide, among other things, enhanced opportunities for tribes to manage federal cultural resources programs on Indian lands. Most often section 106 of the NHPA is used to obtain protection for specific culturally significant areas, but in recent times, this approach has come under fire from non-Indians who want to develop the areas for other uses.

[20] *See, e.g.* Mary Christina Wood, *Protecting the Attributes of Native Sovereignty: A New Trust Paradigm for Federal Actions Affecting Tribal Lands and Resources*, 1 UTAH L. REV. 109 (1995).

cases have weakened constitutional protection of religious practice.[21] Conventional First Amendment analysis is based on three factors: (1) the restricted practice is religious in nature; (2) the challenged government action burdens the practice; and (3) whether there is a "compelling" government interest justifying the action.[22]

Applying the First Amendment to gathering is problematic. The physical act of gathering, from the Native perspective, is part of Indian religious practice. However, this religious aspect is difficult to articulate in Judeo-Christian terms.[23] Similar difficulties present themselves when tribes object to development of sacred or ceremonial areas located on federal lands. For this reason, Indians lobbied for specific protections for Native religious and cultural practices. The result was the American Indian Religious Freedom Act of 1978.[24]

AIRFA was initially hailed as a tremendous step in securing religious freedom for American Indians, but was later found to lack the enforcement mechanisms necessary to ensure protection of traditional Native beliefs and practices. In *Lyng v. Northwest Indian Cemetery Protective Ass'n*,[25] the Supreme Court allowed the U.S. Forest Service to construct a road through a portion of a National Forest traditionally used for religious purposes by members of three Indian tribes in Northwestern California. The Supreme Court even allowed the Forest Service to ignore its own expert witness, who had concluded the road would destroy the religion of the three tribes.[26] AIRFA provided no protection for Indian religious practices on federal lands.

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[21] *See* Employment Division, Department of Human Resources v. Smith, 494 U.S. 872 (1990). In *Smith*, the Court upheld Oregon's denial of unemployment benefits to employees who had been discharged for religious ceremonial use of peyote. Justice Scalia, writing for the majority, distinguished between religious beliefs and religious conduct and held that "the rights of free exercise does not relieve an individual of the obligation to comply with a 'valid and neutral law of general applicability.'" *Smith*, 494 U.S. at 890 (quoting United States v Lee, 455 U.S. 252, 263 n.3 (1982)).

[22] Wilson v. Block, 708 F.2d 735, 740 (D.C. Cir.), *cert. denied*, 464 U.S. 956 (1983) (cited in "Trust Paradigm," *supra* note 20).

[23] Ceremony is difficult to articulate when it is bound up in a way of life. However, some examples of how gathering plant foods and materials are part of Native religions include annual ceremonies in the fall for the first acorn and the first fruit rites in spring and early summer, and world renewal ceremonies, such as the White Deerskin Dance of the Hupa and BigHead Dance of the Wintun. These ceremonial dances connect the tribal peoples with their environment by both giving thanks for what the Earth has provided, and as a prayer for the plants, fish and animals to return in the coming year. *See* ANDERSON, *supra* note 7, at 225-227.

[24] *See supra* note 18.

[25] 485 U.S. 439 (1988).

[26] *Id.* at 463.

Today, a major crisis exists in Indian Country because of *Lyng*. As the dissent noted, the decision leaves no real protection for the practice of traditional religions within the framework of American constitutional or statutory law.[27] The Act does, however, mandate a review of agency policies and guidelines in an effort to identify procedures which may pose obstacles in meeting the intent of the Act.[28] According to this mandate many federal land agencies have reviewed their Indian policies; some have made great progress toward developing formal tribal-use policies.

The primary source of protection for culturally significant lands today is environmental and preservation legislation, such as the National Historic Preservation Act.[29] The purpose of the NHPA is the preservation of historic resources.[30] Although it was preceded by several federal cultural and historic preservation schemes, the NHPA has emerged as the cornerstone of federal historic and cultural preservation policy.[31]

The NHPA requires that federal agencies consult with Indian tribes in carrying out preservation-related activities on public lands.[32] And, federal agencies must "take into account" the effect of an action on a site.[33] Even so, there is still no mandate to protect these historic resources. Although federal agencies must comply with certain procedures before approving projects that affect cultural properties, the NHPA provides no substantive protection of gathering sites or their use.

The final legal argument used by tribes to both protect ancestral areas and to gain access to them for gathering is that the federal government, as trustee for Indian tribes, is obligated to protect cultural resources. American Indian tribes have a unique legal and political relationship with the United States government defined by history, treaties, statutes, executive orders and policies, court decisions and the U.S. Constitution.

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[27] *Id.* at 469. Congress also enacted the Religious Freedom Restoration Act, 42 U.S.C. § 2000bb (1994) (RFRA) in 1993, in response to *Employment Division v. Smith*. *See supra* note 21. However, the Supreme Court later struck down RFRA in *City of Boerne v. Flores*, 117 S. Ct. 2157 (1997) (holding that Congress exceeded the scope of its enforcement power under § 5 of the 14th Amendment by enacting RFRA).

[28] Memorandum from the National Park Service (1994) (on file with author) (Re: Native American Traditional Uses of Renewable Resources in National Parks, A Proposal to Change 36 C.F.R. 2.1 (c)(d)).

[29] 16 U.S.C.A. § 470 to 470w-6 (West 1985 & Supp. 1998).

[30] National Indian Youth Council v. Watt, 664 F.2d 220, 226 (10th Cir. 1981).

[31] *Id.*

[32] *Id.* at 137. *See* National Historic Preservation Act § 106, 16 U.S.C. § 470a(d)(2) (1994).

[33] *See* G. C. COGGINS & ROBERT L. GLICKMAN, PUBLIC NATURAL RESOURCES LAW, § 15B.05[3] (1990).

In 1988, the U.S. Department of Agriculture (the head agency for the USFS) and the U.S. Department of Interior (the head agency for the BLM and the NPS) entered into an Agreement in Principle that established a mutual and beneficial partnership with Indian tribes.[34] This partnership is founded on maintaining a government-to-government relationship with the tribes, and implementing programs that honor Indian rights and fulfill legally mandated trust responsibilities. Under the Agreement in Principle, which was adopted pursuant to the federal trust responsibility, tribal needs should be considered for any proposed federal action that will impact aboriginal uses. However, Indian people or tribes cannot enforce the Agreement; it is merely a promise to consider impacts when adopting new federal regulations.

Although it has not been asserted in court, the Endangered Species Act[35] possibly provides the strongest argument on behalf of California Indian gathering rights. The ESA requires federal land management agencies to ensure that their actions do not jeopardize the continued existence of listed species, and also requires that habitat be managed to protect those species.[36] California Indians should insist that public land management programs include Indian land management techniques, including gathering, which promote native plant growth. In this way, the ESA may not only protect native plant species, but also the cultures that depend upon them.

1. The National Park Service

The NPS is the most restrictive of the federal agencies when it comes to allowing gathering by California Indians. Current NPS regulations have no provisions to permit the gathering of renewable resources by American Indians for religious or other cultural purposes. In 1992, the Southwest Regional Director of the NPS presented a paper in which he addressed the need to provide site managers with authority to accommodate Native ceremonial activities on NPS administered lands.[37] He pointed to AIRFA and said that all federal agencies must reevaluate their current policies to determine whether they negatively im-

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[34] UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE MANUAL, Title 1500, § 1563.
[35] 16 U.S.C. §§ 1531-1543 (1994).
[36] *See, e.g.*, Sierra Club v Lyng, 694 F. Supp. 1260 (E.D. Tex. 1988).
[37] *See* Proposal to Change 36 CFR 2.1, *supra* note 28.

pact the practice of Indian religions. Because NPS was prohibiting access and gathering on Park lands altogether, it was out of compliance with AIRFA.

NPS regulations specifically prohibit the collection of plants, wildlife (including seashells) and other renewable resources for religious or ceremonial purposes, unless specifically authorized by federal law or treaty rights.[38] The strict NPS regulations are due to the history of the Park Service and its Organic Act.[39] Congress established the NPS in 1916 to "conserve the scenery and the natural and historic objects and the wild life [in the national parks] and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."[40] The NPS was created in response to policies of the other federal public land agencies—policies that promoted either uncontrolled use or regulated use, and resulted in over-exploitation of natural resources. Modern NPS regulations reflect the need to preserve lands, but in an untouched state.

In 1995, a modification to the NPS regulations was proposed, but no action has been taken. The proposed modification would have allowed the taking of certain seashells, plants, plant parts, and mineral resources for traditional cultural practices.[41] However, the proposed modification required a determination by the superintendent that the harvesting would not adversely affect park wildlife, reproductive potential of plant species, or other park resources. Moreover, only those members of tribes with "ancestral affiliations" to the particular park site would be allowed to gather there. For example, in the Yosemite National Park, only those tribes who could prove that Yosemite was a part of their aboriginal territory could gather plants in Yosemite Valley.

The proposed modification was not well supported by basketweavers because it appeared to assume that gathering harms plant species; it ignored California Indian basketweavers' vast knowledge of native plants and regional ecosystems. Some basketweavers also felt that it was unreasonable to limit gathering only to members of tribes with ancestral affiliations to the park. Due to complex histories, as well as contemporary intertribal marriage, proving such

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[38] 36 C.F.R. § 2.1(d) (1997). There are no ratified treaties in California, so it is up to NPS to conduct an official rulemaking to allow for gathering by California Indians.

[39] The Organic Act of 1916, 16 U.S.C. § 1 (1994).

[40] *See id.*; *see also* COGGINS & GLICKMAN, *supra* note 33, at § 10D.02[1][a] (discussing reservation of NPS units by congress).

[41] *Id.*

affiliations is difficult.[42] And, the proposed modification offered no guidelines as to how ancestral affiliation would be determined. Furthermore, the proposed rule was limited to gathering for "cultural or religious" practices, so it did not address gathering for baskets that might be sold. In any case, the proposal failed to move forward—and the NPS continues to have a no-gathering policy.

2. Bureau of Land Management

According to the BLM's "Native American Coordination and Consultation" manual, it is BLM policy to: (1) recognize traditional Native American cultural values as an important, living part of American heritage; (2) coordinate and consult with appropriate Native American groups to assure that their concerns are identified; (3) review the BLM's proposed land use and other major decisions for consistency with tribal use; (4) participate in and foster consistent interagency approaches to addressing Native American and tribal government policies and programs; and (5) avoid unnecessary interference with Native American religious practices.[43]

One problem with the current BLM policy is its failure to address individual access to culturally significant areas. Instead, the policy focuses on consultation when proposed action might impact tribal uses. There have been some reported problems between the BLM and California Indians, based on competition with non-Indians for the use of culturally sensitive or gathering areas.[44] When California Indians gather, it is extremely disruptive when campers are in the area or people rudely interfere. Moreover, because the BLM policy is to promote multiple uses by the public, protection of native plant species is not the dominant consideration in agency decision-making.

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[42] It is important to note that tribal boundaries do still exist; many California Indians support ancestral affiliation as a prerequisite to gathering. Traditional land use practices can sustain only a certain number of gatherers. Allowing all California Indians to gather in one particular area could result in overharvesting and the loss of desirable plants. It is the author's view that California Indians should gather only in their aboriginal area unless they are invited to harvest in another area by the caretakers of that area. At any rate, one should at least ask for permission to gather in another tribal area—and ask the right person.

[43] BUREAU OF LAND MANAGEMENT, THE BLM NATIVE AMERICAN POLICY SUMMARY, *summarized from* NATIVE AMERICAN COORDINATION AND CONSULTATION, BLM MANUAL RELEASE NO. 8-58, § 8160 (1990).

[44] For example, in the Mono Lake region there have been reported conflicts between Indian religious practitioners and BLM officials who conduct interpretive programs for the public.

3. United States Forest Service

The USFS, an agency of the U.S. Department of Agriculture, is by far the most significant of the federal agencies affecting California Indian basketweavers and gatherers. The USFS is the largest federal land manager in California, controlling over twenty-million acres of public lands. California's nineteen national forests are located in five of the State's ten bioregions; they represent a significant proportion of the State's vegetation types and ecosystems.[45] The array of plants and animals in these national forests is extremely important to California Indians. For example, over one-hundred plants culturally significant to the Sierra MeWuk have been documented in the Stanislaus National Forest in the Central Sierra Nevada.[46] Not surprisingly, the gathering and land management policies of the USFS are of great concern to California Indians.

The Tribal Relations Program Manager in the California regional office of the USFS has produced a draft proposal policy for cultural forest resources and management, and has worked to inform and educate USFS employees about the agency's Native American policy and its underlying responsibilities to California Indians.[47] Several forests now have Native American Program liaisons who attempt to facilitate consultation with nearby tribes interested in or potentially affected by national forest projects and activities.

The USFS policy on "Special Forest Products" is of particular interest to California Indian gatherers. "Special Forest Products" are plants and plant materials sold under the same authority as timber sales, as described by the National Forest Management Act (NFMA)[48] and implemented by the USFS. The current policy for commercial gathering by non-Indians (mostly for use in floral arrangements and other crafts) of "Special Forest Products" requires a permit and fee payment.

Sometimes, however, the USFS staff confuses policies against commercial use by non-Indians with the USFS "permissive use" policy for American Indians' personal or community cultural use. Under the permissive use policy, California Indians may gather small amounts of forest products for personal use without a permit or fee, unless the Service finds it necessary to control access or there is

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[45] *See* Letter, *supra* note 16.
[46] *Id.*
[47] *See* FOREST SERVICE MANUAL, *supra* note 34.
[48] National Forest Management Act, 16 U.S.C. §§ 1600-1614 (1994).

over-harvesting.[49] Some the USFS field staff does not realize that there is a permissive use policy for Indian gatherers; they can make gathering difficult and overly bureaucratic.

In 1995, the Department of Agriculture issued a memorandum to Forest Supervisors, informing them of current problems facing the management of "Special Forest Products" and potential conflicts over their use and sustainability.[50] The memo noted the culturally important uses of botanicals (*e.g.*, sedge, deer grass, bear grass, redbud, willow, manzanita, onion, acorn, moss and lichen, mushroom, and fern) by most Indian tribes. It then outlined the conflict between non-Indian commercial harvesters and basketweavers in some areas of California because the methods used by commercial harvesters may result in the loss of the entire plant. A basketweaver, for example, gathers bear grass only in the late summer, and then, only the center shoots. Commercial harvesters, on the other hand, cut the entire plant at the base, causing the root system to die. The practical consequence of such commercial "techniques" is the loss of entire gathering areas for some California Indian basketweavers.

The mushroom is a traditional food item that is harvested by Indians and by non-Indian commercial harvesters in the national forests. In the Orleans District in Northern California non-Indian commercial harvesters have been known to enter the forest at night, and then use spotlights to clear an entire area. By morning all the mushrooms are gone—including the delicate mycelium, which is the root system allowing the mushroom to return every year. Indians who gather mushroom have learned to cut at the base, leaving the mycelium behind for future growth; the commercial harvesters pull up the entire mushroom, leaving the area without the means for regeneration.

Recent Forest Service investigations reveal that some of the commercial harvesters come from Oregon and return to sell the mushrooms in groceries and farmers markets.[51] In some cases the out-of-state harvesters lack proper permits, which are designed to address the problem of overharvesting. Even so, there is no practical way for the Forest Service to prevent "fly by night" mushroom harvesting. Unless the District decides to place guards out at night, all that can be done is to try to educate the public about the permit system.

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[49] 36 C.F.R. § 223 (1997).

[50] Memo from the USFS to Forest Supervisors 1 (Oct. 30, 1995) (on file with author) (Re: Special Forest Products—Use and Permits in Regard to California Indian Tribes and Communities).

[51] Meeting between members of the California Indian Basketweavers Association and Regional Forester Lynn Sprague, San Francisco (1995) (personal communication).

B. Pesticide Spraying on Public Lands

Traditional foods and plants are further threatened by pesticide spraying on federal lands. One Shoshone basketweaver reports that she can no longer gather willow in traditional areas because herbicides have deformed the plants. According to her, "chemical sprays cause the willow to be bumpy inside and have a wormy center, so that the shoots don't grow straight and are then unusable."[52] Some basketweavers who have used plants from previously sprayed areas report experiencing numbness and sores in their mouth and gums.[53] This is due to pesticide exposure during traditional preparation methods—which include passing plant materials through the mouth.[54]

Herbicide spraying of forests affects many of the plants used by California Indians in foods and teas, for healing and ceremonial purposes, and in making baskets and regalia. Acorns, for example, are an important food source for many tribes, yet oak trees are often treated with herbicides because they "compete" with commercially harvested conifers for sunlight and nutrients. In the past four years, plans for the use of herbicides, such as hexazinone, triclopyr and glyphosate, have been proposed and implemented in the Stanislaus, Lassen, Eldorado, and Sierra National Forests.

In 1995, the USFS proposed the largest ever total herbicide application for California National Forests. The combined projects reignited a public controversy which had been dormant since 1984, when the agency voluntarily stopped all herbicide spraying in California—after a federal judge halted such practices in Oregon and Washington.[55]

A number of environmental groups filed a lawsuit in response to the Forest Service's plan to spray a large area of the Stanislaus National Forest with hexazinone, triclopyr and glyphosate.[56] Forest officials temporarily suspended aerial spraying of hexazinone and triclopyr under an out-of-court agreement

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[52] Kathy Kauffman,...*and in Eastern California*, NEWS FROM NATIVE CAL., Fall 1992, at 6.

[53] *Id.*

[54] Most basketweavers use their teeth to split, peel or break down plant parts during preparation for use in basketweaving. For example, weavers needing peeled shoots gather willow sticks in early spring and fall because the willow bark slips off easily when there is more sap and fewer leaves. As the shoots are gathered, the weaver passes the stick through their teeth to loosen and remove the thin outer bark. This method, preferred by basketweavers, results in immediate exposure to pesticides if the area has been treated.

[55] Jane Braxton Little, *Herbicide Returning to the Forest*, THE SACRAMENTO BEE, April 10, 1995, at B1.

[56] *Massive Aerial Spraying Approved in Stanislaus NF, Tuolumne MeWuk Tribe Expected to Oppose*, CAL. INDIAN BASKETWEAVERS ASS'N NEWSLETTER, Nov. 1995, at 9.

which allowed them to use glyphosate (Roundup) along the highway approaching the west entrance of Yosemite. However, in 1996, the USFS dropped 10,700 pounds of granular hexazinone from helicopters, covering 3,075 acres of the Stanislaus National Forest.

1. Impacts on Native Plant Species and Their Use by California Indians

The full impact of the Forest Service's actions may not be fully known for some time, as long-term consequences are currently being studied. The immediate impact is the complete loss of culturally significant plants and other food sources. Native Californians harvested plants such as the Kaweah brodiaea *(Brodiaea insignis)* and white sedge *(Carex albida)* for their food and basketry making; today these plants are classified as endangered by the Department of Fish and Game.[57] Prohibiting Indian people from gathering—which promotes regrowth—only exacerbates the problem.

When a large region is treated with pesticides, it is likely that native plants will be killed, become too toxic for use, or be altered so that they lack adequate quality for use. Moreover, California Indians who continue to gather and hunt native animal species in these areas report the absence of honeybees, deformities in fish and lesions on the internal organs of deer. Native peoples who have continued to maintain their close relationship with their aboriginal areas are seeing the cumulative impacts of pesticide use and inferior land management practices.

2. Impacts on California Indian Gatherers

California's pesticide use has increased 31% since 1991.[58] A report published by Californians for Pesticide Reform in 1997 documents startling increases in nearly every category of pesticide use during the period 1991-1995.[59] The report details an increase of 129%, to more than 23 million pounds (active ingredient), in reported use of cancer-related pesticides. It also documents an increase of 52%, to almost 9 million pounds, of acutely toxic pesticides in California.[60] The report further indicates that in 1995, 4.2 million pounds of pesticide

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[57] ANDERSON, *supra* note 7, at 171.

[58] CALIFORNIANS FOR PESTICIDE REFORM, THE RISING TOXIC TIDE 5 (1997).

[59] *Id.*

[60] *Id.*

were applied in forests, rights-of-way, aquatic habitats and other nonagricultural areas—the types of environments where basketweavers are likely to gather plants. Increased reliance upon pesticides to control animal pests and "weeds" or undesirable plants is causing increased claims of health-related impacts from pesticides.[61]

The government is not the only source of California Indian gatherers' pesticide-related health problems. For example, in the Northwest Coast region there had been a history of herbicide use, but national forests in the area suspended their spraying programs in response to public pressure and concern over cancer-related illness. Although federal spraying has been eliminated, private timber companies continue to treat with pesticides and there have been reports of high incidence of cancer, respiratory ailments and heart disease among nearby communities.[62] As researchers across the country uncover pesticide related illnesses, it is hoped their studies will influence risk assessment for pesticide use.

In 1994, the California Indian Basketweavers Association (CIBA) filed a petition with the Environmental Protection Agency requesting the EPA to clarify Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)[63] regulatory definitions to include:

> (a) protection for Native crops harvested for food, food implements, medicine, commercial, cultural and spiritual uses;
> (b) the uses of these plants by the Native people when making risk assessments in registration, labeling and reporting; and,
> (c) consultation with CIBA and other affected tribal people when registering pesticides known to be used in treating public lands.

The petition also requested that the EPA propose an amendment to the FIFRA regulatory definitions to include protection of Native crops harvested for food, medicine, and cultural and spiritual uses.[64]

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[61] One recent report found that Lompoc Valley residents suffer from higher levels of bronchitis, asthma, lung cancer and infant respiratory disease than do people in similar regions of the state. Lompoc residents have long claimed that drifting pesticides make them ill. *Illnesses Tied to Drifting Pesticides*, DAVIS ENTERPRISE, October 23, 1997, at A1.

[62] *Vision Statement*, CAL. INDIAN BASKETWEAVERS ASS'N NEWSLETTER, Dec. 1997, at 13.

[63] 7 U.S.C. §§ 136-136y (1994).

[64] Petition For Worker Protection Standard Rulemaking Comment on NASDA Petition from California Indian Basketweavers Association to U.S. Environmental Protection Agency Administrator (Nov. 4, 1994) (on file with author).

The CIBA petition followed a National Association of State Departments of Agriculture (NASDA) petition, which sought changes to certain worker protection standards. CIBA used the NASDA proceeding to seek relief for California Indian basketweavers who risk exposure to harmful chemicals when they harvest and use native plants in ways not considered by the EPA when listing the chemicals for use. The EPA has not formally responded to the CIBA petition.

3. California Department of Pesticide Regulation Study

In the meantime, CIBA is working with the California Department of Pesticide Regulation on a study funded by the USFS. This study will develop forestry herbicide residue measuring methodologies, and will perform field sampling to determine dissipation rates of chemicals in plants gathered by California Indians. The study will also measure off-site movement of pesticides.[65] The study will measure residue levels in various plants, and will also document whether glyphosate, tricopyr and hexazinone residues drift onto adjacent gathering areas.[66]

The main issue raised in establishing the study methodologies was whether California Indians wanted to participate in a traditional "risk assessment" strategy. Risk assessments are used in setting regulatory standards for "acceptable" levels of human health risks for exposure to particular pesticides.[67] Potential risks of harm are then weighed against economic benefits of using the agent to determine at what level the risk of harm is acceptable by the government. Ultimately, CIBA chose only to cooperate with DPR in developing residue measuring methodology and field sampling to determine residue levels in plants and the surrounding environment. Cooperating with the full quantitative risk assessment conflicts with CIBA's policy condemning the idea of "acceptable risk" for pesticide use.[68]

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[65] *Sierra Pesticide Study Enters New Phase*, CAL. INDIAN BASKETWEAVERS ASS'N NEWSLETTER, June 1997, at 11.
[66] *Id.*
[67] *See* Toxic Substances Control Act, 15 U.S.C. §§ 2601-2692 (1994) (giving EPA authority over any chemical substance or mixture—other than pesticides and food products); Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§ 136-136y (1994) (governing EPA's regulation of pesticides); Safe Drinking Water Act, 42 U.S.C. §§ 300f-300j-26 (1994) (governing EPA regulation of contaminants in public drinking water systems); Clean Air Act § 112, 42 U.S.C. § 7412 (1994) (requiring EPA to regulate emissions of hazardous air pollutants); and sections 304(*l*) and 307 of the Clean Water Act, 33 U.S.C. §§ 1314, 1317 (1994) (requiring EPA to regulate toxic water pollutants).
[68] *Id.*

DPR completed the first part of the study in April 1997.[69] For the study, DPR targeted fourteen plants, and collected samples for thirteen.[70] Of ninety-two samples taken inside the treatment areas, forty-nine percent contained detectable residues of glyphosate, triclopyr and/or hexazinone. However, it is important to note that only plants that were fully or partially healthy were sampled. Plants with all brown leaves were assumed to contain herbicide residues and were not sampled.

From this starting point, DPR researchers will continue field sampling to determine how long after spraying pesticide residues can be detected both on-site and in nearby areas. Using this data, DPR will then most likely conduct an exposure assessment to determine whether residue levels exceed current pesticide exposure standards.

The problem with this strategy is that it may lead to further limitations on gathering in the national forests. If DPR produces scientific data indicating that pesticides dissipate after a specified amount of time, then spraying will merely be followed by limitations on gathering for that period of time. Instead of eliminating pesticides, agencies will merely select pesticides having the lowest drift rate and fastest dissipation rate. This type of decision-making ignores the fact that entire plant species may be lost, and that pesticides unfavorably alter the plants' characteristics.

C. Endangered Plant Species: The Role of the Fish and Wildlife Service

The Endangered Species Act (ESA)[71] is viewed by many as the most stringent plant and wildlife protection law ever enacted by any country.[72] The Act applies only to species of flora and fauna that the Secretary of Interior officially lists as endangered or threatened. But, once a species is listed, federal public land agencies must ensure that their actions do not jeopardize its continued existence.[73]

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[69] STATE OF CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION, RESIDUES OF FORESTRY HERBICIDES IN PLANTS OF INTEREST TO NATIVE AMERICANS: PHASE ONE—DEVELOPMENT OF METHODOLOGIES AND PILOT SAMPLING (1997).

[70] Appropriate samples of acorns could not be obtained due to low acorn production. *Id.* at 9. Acorns which were found contained worms and/or mold and were unsuitable for analysis. *Id.* My inference from this is that the herbicide treatments are causing both of these problems, and eliminating acorn as a food source.

[71] 16 U.S.C. §§ 1531-1543 (1994).

[72] GEORGE COGGINS ET AL., FEDERAL PUBLIC LAND AND RESOURCES LAW 784 (3d ed. 1993).

[73] E.S.A. § 7, 16 U.S.C. § 1536 (1994) *cited in* Scott W. Hardt, *Federal Land Management in the Twenty-First Century: From Wise Use to Wise Stewardship*, 18 HARV. ENVTL. L. REV. 345, 383 (1994).

In the ESA, Congress determined that the preservation of nonhuman species is essential, not only because they provide recreational, scientific, and aesthetic benefits, but also because they play an integral role in preserving the ecological integrity of their environments.[74] California has its own version of the ESA, which provides similar protection for species that are endangered or threatened in California's ecosystems.[75]

Under the ESA, the Secretary is authorized to make listing determinations, but the Fish and Wildlife Service (FWS) is the agency which actually studies potential impacts on a species.[76] When adverse effects to listed species are likely due to government action, the acting agency must enter into formal consultation with the FWS.[77]

The ESA protects endangered plants, although public attention has largely been focused on endangered fish and wildlife. Section 6 of the ESA provides for state and federal cooperation; thus, the states may develop comprehensive plant protection programs which are stricter than the federal ESA.[78]

The 1977 California Native Plant Protection Act (NPPA) helps to conserve native plants by requiring a permit to collect, transport or sell listed plants.[79] The ESA only regulates the taking of plants on federal land or where federal action is involved, and only prohibits taking by collection, not through modification or habitat destruction.[80] In California, NPPA prohibitions against taking apply to listed plants on private as well as public lands, but there are exceptions.[81]

The Department of Fish and Game, Natural Heritage Division, Plant Conservation Program (PCP) administers the NPPA. The PCP compiles and updates

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[74] *See* Hardt, *supra* note 73, at 382 (citing S. REP. No. 307, 93d Cong., 1st Sess. 1-2 (1973), *reprinted in* 1973 U.S.C.C.A.N. 2989, 2990).

[75] *See* 16 U.S.C. § 1535 (1994). A species may be listed in the California, but not appear on the federal list because the species is not nationally endangered or threatened. California may determine that particular species are in danger of extinction in California's ecosystems. Since it is easier to monitor plant species at the state level, the California Biodiversity Database compiles plant data and makes listing recommendations to the California Department of Fish and Game (the state equivalent of the U.S. Fish and Wildlife Service).

[76] E.S.A. § 7, 16 U.S.C. § 1536(a) (1994); 50 C.F.R. § 402.10 (1997).

[77] JACKSON BATTLE ET AL., 1 ENVIRONMENTAL LAW 169 (2d ed. 1994).

[78] *See* 16 U.S.C. § 1535 (1994).

[79] Lynn E. Dwyer and Dennis D. Murphy, *Fulfilling the Promise: Reconsidering and Reforming the California Endangered Species Act*, 35 NAT. RESOURCES J. 735, 737-39 (1995).

[80] E.S.A. § 9, 16 U.S.C. 1538(a)(2) (1994).

[81] *See* Dwyer and Murphy, *supra* note 79; CAL. FISH & GAME CODE §§ 2080-2084 (West 1984 & Supp. 1998).

the state and federal lists for endangered, threatened, rare, or candidate (proposed) plants. There are over 250 listed plant species. Twenty-three federally proposed plants in California are without State designation.[82] Many of the listed species are culturally significant to California Indians. From manzanita (eleven subspecies of *Arctostaphylos* sp.), to wild onion *(Alluim munzii)*, to white sedge *(Carex albida)*, California Indians are losing their traditionally used plant species. Unfortunately, no one is doing anything about it.

There is a vast communication gap between the PCP and California Indian gatherers. Although it is common to hear California Indians talk about the disappearance of certain species,[83] they are largely unaware of state and federal laws that protect native plants. In addition, the PCP has no mechanism for cross-checking listed species with culturally significant plants. It seems that there is great room for improvement in the PCP in terms of incorporating Native traditional knowledge and consultation with Indian gatherers.

Of course, it would be helpful if California Indians were providing information on culturally important plants. California Indians, like most other Native groups, are very secretive about their practices. Native basketweavers are particularly cautious about disclosing information on the location of these plants. This only exacerbates the problems of compiling accurate information on plant health and numbers. In the coming years, the gap between the PCP and Native gatherers must be addressed so that Native plant management techniques can be incorporated into plant species recovery programs.

IV. Possible Management Solutions—and Problems

There are possibilities for positive changes in the management of federal lands. The Orleans District of the Six Rivers National Forest is one example. There, the Forest Service works closely with basketweavers and Karuk tribal members to conduct controlled burns, and to devise options for protecting medicinal plants and local mushroom. However, to get to this point, the local tribal people have had to divulge information such as which plants are used, when they are gathered and where the plants are located. This is a sticking point for

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[82] Department of Fish and Game, Natural Heritage Division, Plant Conservation Program, State and Federally Listed Endangered, Threatened, and Rare Plants in California (1998).

[83] Anderson, *supra* note 7, at 199 ("When people don't use the plants they get scarce. You must use them so they will come up again. All plants are like that. If they're not gathered from, or talked to and cared about, they'll die.").

other tribes, who are distrustful of federal agencies. The conflict is great between protecting sensitive cultural information and protecting culturally important native species from pesticides or overharvesting.

Recently, the Sierra National Forest initiated a unique pilot project in California. The Forest Service set aside one-hundred square miles of land where they will only use Indian land management practices. The project is focusing on the use of controlled burns to promote oak production, and also on identification and location of culturally significant plant species. The oak study has resulted in a better understanding of how fire promotes acorn production, tree health, and access for harvesting.[84] Identification of native plant species has proven more difficult however, because the plants are dispersed over the region, and often are difficult to distinguish from other species.[85] Even so, this pilot project may soon provide California Indian gatherers with a model that could be implemented in other National Forests where native plants and foods are gathered.

In the pesticide debate, the choice of whether herbicide use will continue in the National Forests ultimately comes down to economics. No formal environmental impact study was even conducted for a major herbicide application in 1995 in the Lassen National Forest. The Almanor District Ranger concluded that it was "not a major federal action that would significantly affect the human environment."[86] He further defended the use of herbicides as the only cost-effective way to manage national forests.

The cost breakdown was simple: $350 per acre using hand crews to dig out competing brush, or $150 per acre for applying herbicides by hand.[87] When the application area covers thousands of acres, the monetary savings are substantial. For pesticide opponents, however, decisions based on dollars fail to incorporate the true value of forest health. For California Indians who are trying to maintain ancient traditions and ways of life for their children, the value of forest health is immeasurable in dollars.

Even where the agency attempts to mitigate direct exposure to humans by spraying outside of the gathering season and by posting signs to deter gathering, the plants themselves must struggle to survive repeated herbicide applications.

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[84] Telephone Interview with Lorrie Planas, Sierra Nevada National Forest, Tribal Government Program (April 6, 1998).

[85] *Id.*

[86] *See* Braxton Little, *supra* note 55.

[87] *Id.* (quoting John Fiske, a Forest Service reforestation specialist).

Since the purpose of spraying herbicides in most cases is to promote timber growth, competing plants species used by California Indians may perish. For this reason, conventional feasibility and health-based risk assessment do not adequately account for California Indians who are practicing essential elements of their cultures. The only way to do so is to radically change the dominant paradigm of timber management—which relies on herbicides to promote a cash crop.

V. CONCLUSION

California Indians have many of the same interests as non-Indian land managers—protect native species, and promote forest health and diversity. Although there are shared goals, methodologies often conflict. This Article presents four main ideas. First, this Article suggests that plant management and gathering by California Indians promotes forest health and native plant abundance. Second, this Article explains that pesticide spraying kills native plants and alters plant characteristics, rendering them unsuitable for basketry and cultural use. Third, this Article acknowledges that commercial harvesting of native plants is resulting in the loss of native species. Finally, this Article maintains that leaving ecosystems completely alone without using fire or other horticultural technique results in declining plant health and diversity.

Although current environmental, cultural and historic preservation programs do not provide explicit rights for California Indians to continue aboriginal practices on the public lands, they implicitly refer to Native ecosystem management. Hopefully, the connection between California Indians and the public lands will be formally recognized in finalized regulations, and not merely mentioned in agency policy.

Maybe, someday soon, California Indians will be at the forefront of efforts to curb species extinction. They have always believed that they are the true stewards of the lands of California. California Indians stand on the verge of proving their stewardship to the federal agencies which have allowed the forests to fall into disarray.