

Restoring Reciprocal Relationships for Social and Ecological Health

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Indigenous stewardship contributes to ecological biodiversity and ecosystem resiliency. Restoring reciprocal relationships between American Indians and traditional lands can improve ecosystem health and cure social ills through the restoration of traditional foods, medicines, and culturally utilized plants. Federal regulations and failure to recognize tribes near Yosemite National Park threaten endangered cultures and languages as well as traditionally utilized native plants. The societal understanding of the term natural, meaning without human influence, is becoming more complicated. Human-induced climate change and recognition of landscapes previously thought absent of human influence are now understood to have been shaped in part by Indigenous people, mainly through anthropogenic fire. Preserving public lands without Indigenous stewardship does not protect natural and cultural resources from impairment for future generations of Indigenous children.

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INTRODUCTION

Yosemite National Park is widely known as the birthplace of modern land preservation, but its history of sustainable land management is much older. Yosemite Valley was managed by the Ahwahneechee, Indigenous people of Ahwahnee, now known as Yosemite Valley, for food, basketry, and aesthetic purposes. The descendants of the Ahwahneechee are associated with seven tribes with differing federal recognition (political) status: the American Indian Council of Mariposa County (also known as the Southern Sierra Miwuk Nation), the North Fork Mono Rancheria, the Tuolumne Band of Me-Wuk Indians, the Picayune Rancheria of Chukchansi Indians, the Mono Lake Indian Community (Kutzadika'a), the Bridgeport Paiute Indian Colony, and the Bishop Paiute Tribe.

Indigenous people of Yosemite Valley burned the landscape and different habitats to promote the growth of plants for basketry and food, to open forest corridors, to attract wildlife, and to remove old growth to allow for an unimpeded view of approaching groups as well as cultural and aesthetic reasons.¹ Dendrochronological research on lightning ignition patterns and fire history records in Yosemite Valley confirm ethnographic accounts of American Indians regularly using fire to manage the land with the use of small, rotating, low-intensity ground fires for proto-agricultural purposes.² Before fire suppression began around 1890, the historical mean fire return interval in Yosemite Valley was 1.92 years.³ This interval was similar to other areas in the Sierra Nevada but was attributed explicitly to American Indian conduct based on the presence of fire-scarred trees within archaeological sites.⁴ Lightning naturally occurs on the ridges of the valley due to topography, but lightning-ignited fires in Yosemite Valley have been documented only once since the 1930s.⁵ Most of the fires in Yosemite Valley, before European settlement, were due to the intentional efforts of the Indigenous people who lived there.

Institutional and societal erasure of American Indian presence and influence on the landscape has significant social and ecological implications for managing

1. Linn Gassaway, *Native American fire patterns in Yosemite Valley a cross-disciplinary study*, in PROCEEDINGS TALL TIMBERS FIRE ECOLOGY CONFERENCE, Vol. 23, 29, 31 (2007).

2. Dendrochronology is the study of tree rings, which determines age and environmental changes. Linn Gassaway, *Native American fire patterns in Yosemite Valley Archaeology, dendrochronology, subsistence, and culture change in the Sierra Nevada*, 22 SOC'Y CAL. ARCHAEOLOGY PROC. 1, 1 (2009).

3. Gassaway, *supra* note 1, at 36 (stating the average time for a fire to return to a defined area usually related to a historical timeframe is called a mean fire interval (MFI)).

4. *Id.*

5. Gassaway, *supra* note 2, at 3.

public and private land.⁶ Reinforcing national parks and other public lands as landscapes void of human influence or even existence, and as best protected by disregarding the traditional management practices of Indigenous people, ensures these cultural landscapes are forgotten or replaced with ecosystem type-conversion. Since the establishment of national parks, the U.S. government has ignored the needs and influences Indigenous peoples had on these landscapes in order to deny territorial claims and curtail traditional management practices.⁷

The Department of the Interior (DOI) perpetuates the process of removal and erasure through recent regulations that continue to prohibit traditionally associated groups and tribes from stewarding their ancestral territories. In November of 2018, the Office of Federal Acknowledgment (OFA), a division of DOI, gave a negative proposed finding to the Southern Sierra Miwuk Nation.⁸ During its centennial year in 2016, the National Park Service (NPS) implemented a rule called Gathering of Certain Plants or Plant Parts by Federally Recognized Indian Tribes for Traditional Purposes (“Gathering Rule”).⁹ NPS disguised this rule as allowing federally recognized tribes the ability to apply for a permit through the National Environmental Protection Act (NEPA) to gather traditionally utilized plants.¹⁰ However, in reality this rule hinders tribal sovereignty and ignores the broken system for federal tribal recognition.¹¹

Today, descendants of Ahwahneechee people, “people of the gaping mouth,” and descendants of people who signed treaties and agreements with the federal government wait for a decision from OFA about whether the Southern Sierra Miwuk Nation will become a federally recognized tribe.¹² It is convenient

6. See, e.g., Lucy Diekmann et al., *Native American Management and the Legacy of Working Landscapes in California* *Western landscapes were working long before Europeans arrived*, 29 RANGELANDS 46, 46 (2007) (noting that “[i]gnorance of the influences and needs of American Indians was once an excuse for ignoring territorial claims and curtailing traditional management practices”).

7. ROBERT H. KELLER & MICHEAL F. TUREK, *AMERICAN INDIANS AND NATIONAL PARKS* xii-xiv (1990); see generally Theodore Binnema & Melanie Niemi, *let the line be drawn now’ Wilderness, Conservation, and the Exclusion of Aboriginal People from Banff National Park in Canada*, 11 ENVTL. HIST. 724, 725 (2006) (noting that “in Canada at least, and probably in the United States, aboriginal people were excluded from national parks”); Paige West et al., *Parks and Peoples: The Social Impact of Protected Areas*, 35 ANN. REV. ANTHROPOL. 251, 258 (2006); Diekmann et al., *supra* note 6, at 46; Jeanette Wolfley, *Reclaiming a Presence in Ancestral Lands: The Return of Native Peoples to the National Parks*, 56 NAT. RESOURCES J. 55, 56 (2016).

8. Proposed Finding Against Acknowledgment of the Southern Sierra Miwuk Nation, U.S. Dep’t of the Interior Bureau of Indian Affairs (Nov. 16, 2018) [hereinafter Proposed Southern Sierra Miwuk Finding]. Federal Recognition confers a government-to-government relationship and access to benefits reserved for members of Indian tribes. See U.S. Dept. of the Interior, Indian Affairs, *Frequently Asked Questions*, <https://www.bia.gov/frequently-asked-questions>.

9. Gathering of Certain Plants or Plant Parts by Federally Recognized Indian Tribes for Traditional Purposes, 81 Fed. Reg. 45024, 45025 (July 12, 2016) (codified at 26 C.F.R. pt. 2).

10. Michelle Tirado, *National Park Service Does Face-Plant With New Rule on Gathering Plants*, INDIAN COUNTRY TODAY (Aug. 20, 2015), <https://newsmaven.io/indiancountrytoday/archive/national-park-service-does-face-plant-with-new-rule-on-gathering-plants-xYKGltAdPU6v1pYvDIBPrA/>.

11. MARK MILLER, *FORGOTTEN TRIBES: UNRECOGNIZED INDIANS AND THE FEDERAL ACKNOWLEDGMENT PROCESS* (U. of Nebraska Press, 2004).

12. See generally Proposed Southern Sierra Miwuk Finding, *supra* note 8.

for the federal government to deem tribes awaiting federal acknowledgement as non-existent. For non-federally acknowledged Native Americans, it is painful.¹³ Overcoming poverty in a rural area of Mariposa County while facing a disproportionate amount of health disorders are common factors that have kept tribes like the Southern Sierra Miwuk Nation searching and praying for justice. Key observations from the 2017 Mariposa County Needs Assessment state that the homeless population in Mariposa County is disproportionately Native American, representing 12 percent of the homeless population while comprising only 3 percent of the overall population.¹⁴ Whether or not the federal government acknowledges tribal nations, American Indian people continue to exist, practicing their traditions and maintaining relationships with their relatives and ancestral homelands.

Ahwahneechee people once managed their environment to produce grasses and seeds for food and basketry, among other utilitarian and aesthetic purposes.¹⁵ These reciprocal relationships existed for millennia between Indigenous people and their environment and restoring them is what some scientists might call adaptive management.¹⁶ Restoring native plants for cultural purposes, including traditional foods, is of utmost importance to American Indian people who face disproportionately high rates of heart disease, diabetes, and other health disorders.¹⁷ Revitalizing reciprocal relationships encourages American Indians to exercise and eat traditional foods and can help improve emotional and spiritual wellbeing.¹⁸

This Article explains the challenges and the ongoing efforts to restore reciprocal relationships between Indigenous peoples and their environment, arguing that these relationships are at the heart of true sustainability. Indigenous caretaking practices and contributions are essential to sustainable landscape management for the future. I use Native American, American Indian, and Indigenous interchangeably, as the appropriation of Native American has changed to mean anyone born in the United States. American Indian is the official term used by the U.S. Bureau of Indian Affairs. Indigenous is a widely

13. Federal acknowledgement (or federal recognition) is the process by which Native American tribes achieve recognition by the U.S. federal government as sovereign nations, granting them access to services, rights, and resources discussed in this Article. See Nat'l Congress of Am. Indians, *Federal Recognition*, <http://www.ncai.org/policy-issues/tribal-governance/federal-recognition> (last visited May 19, 2020).

14. Clarity Social Research Group Mariposa County, *Mariposa County Needs Assessment 22* (2017), <https://www.mariposacounty.org/DocumentCenter/View/58734/2017-Mariposa-Needs-Assessment-?bidId=>.

15. See Gassaway, *supra* note 2, at 3.

16. Fikret Berkes et al., *Rediscovery of traditional ecological knowledge as adaptive management*, 10 *ECOLOGICAL APPLICATIONS* 1251, 1259 (2000). Adaptive management includes managing resources with uncertainty with an emphasis on resiliency for future outcomes. *Id.* at 1260.

17. Indian Health Service, *Fact Sheets Disparities*, U.S. DEP'T OF HEALTH & HUMAN SERV. (Oct. 2019), <https://www.ihs.gov/newsroom/factsheets/disparities/>.

18. Jonathan Long et al., *Cultural Foundations for Ecological Restoration on the White Mountain Apache Reservation*, 8 *ECOLOGY & SOC'Y* 4 (2003).

accepted term for people whose creation stories are tied to the land and whose ancestors have stewarded a place for hundreds of generations.

I. SOCIAL AND ECOLOGICAL BENEFITS OF RESTORATION

Ecological systems exist within a social context.¹⁹ Ecological restoration seeks to reverse resource degradation and biodiversity loss over time as humans have negatively affected landscapes.²⁰ Land managers are beginning to experiment with prescribed burning and grazing to reduce residual plant material and to encourage emergent plants for waterfowl use as nests and food.²¹

Restoring plants for cultural purposes has the potential to improve the health and wellbeing of Indigenous people by ensuring cultural continuance and nutritional food availability.²² For example, prescribed burns help to reduce high fuel loads and pests and encourage the growth of plants²³ associated with acorn, basketry, and other cultural purposes.²⁴ Other essential effects may include creating more resilient ecosystems by managing the landscape for heterogeneity and promoting biodiversity among plants and animals, while revitalizing Indigenous caretaking relationships with ancestral and sacred places.²⁵ Restoring cultural fires has the potential to benefit human wellbeing and create long-term commitments to restoration processes.²⁶ Those who have a deep relationship with the land celebrate long-term commitments to care for the land.

The success of ecological restoration depends on effective partnerships between conservationists, managers, and Indigenous people, and should be defined ethically as well as technically.²⁷ Indigenous Traditional Ecological

19. Ken Lertzman, *The Paradigm of Management, Management Systems, and Resource Stewardship*, 29 J. ETHNOBIOLOGY 339, 347 (2008).

20. Cathy Geist & Susan Galatowitsch, *Reciprocal Model for Meeting Ecological and Human Needs in Restoration Projects*, 13 5 CONSERVATION BIOLOGY 970 (1999); RENÉ SENOS, *Rebuilding Salmon Relations*, in HANDBOOK OF REGENERATIVE LANDSCAPE DESIGN 205, 210 (Robert L. France, ed., CRC Press 2008) (noting that “[i]n restoration we make restitution”).

21. Loren M. Smith & John A. Kadlec, *Comparisons of Prescribed Burning and Cutting of Utah Marsh Plants*, 45 GREAT BASIN NATURALIST 462, 462 (1985); Scott McWilliams et al., *Effects of Prescribed Fall Burning on a Wetland Plant Community, with Implications for Management of Plants and Herbivores*, 67 W. N. AM. NATURALIST 299 (2007).

22. See JONATHAN W. LONG ET AL., U.S. DEP’T OF AGRIC., RESTORING CALIFORNIA BLACK OAK ECOSYSTEMS TO PROMOTE TRIBAL VALUES AND WILDLIFE (2016).

23. HAROLD BISWELL, *PRESCRIBED BURNING IN CALIFORNIA WILDLANDS VEGETATION MANAGEMENT* (U. of Cal. Press, 1999).

24. See Stephen Underwood et al., *Restoring Ethnographic Landscapes and Natural Elements in Redwood National Park*, 21 ECOLOGICAL RESTORATION 278, 280 (2003).

25. See NEIL SUGIHARA ET AL., *FIRE IN CALIFORNIA’S ECOSYSTEMS* (2006); Don Hankins, *The Effects of Indigenous Prescribed Fire on Herpetofauna and Small Mammals in Two Central Valley California Riparian Ecosystems*, 49 CAL. GEOGRAPHER 31 (2009); see, e.g., Jared Aldern & Ron Goode, *The stories hold water Learning and burning in North Fork Mono homelands*, 3 DECOLONIZATION: INDIGENITY, ED. & SOC’Y 26 (2014); Dana Lepofsky, *The Past, Present, and Future of Traditional Resource and Environmental Management*, 29 J. ETHNOBIOLOGY 161 (2009).

26. Geist & Galatowitsch, *supra* note 20.

27. *Id.*; Yadav Uprety et al., *Contribution of traditional knowledge to ecological restoration Practices and applications*, 193 ECOSCIENCE 225 (2012).

Knowledge (TEK) and management have been ignored for decades.²⁸ Expanding the definition of restoration to be more holistic and inclusive in working with tribes and communities to restore culturally significant plants and landscapes may help revitalize tribal knowledge and social cohesion. Historical, social, cultural, political, aesthetic, and moral aspects should be integrated into the ecological restoration and research used in project planning and implementation.

A. Native American Homelands

There is a widespread, naïve notion that parks and preserves were “uninhabited” and “pristine” landscapes with little to no human influence before western management.²⁹ Archeological, ethnological, and dendrochronological research are determining the extent of the (once thought absent) influence that American Indian people had on the landscape.³⁰ There is increased understanding that these “natural” landscapes were effectively and often intensively managed for thousands of years for food, culture, basketry, and wildlife habitat enhancement,³¹ and that these landscapes were cultural or ethnocultural landscapes.³² Imposing non-Indigenous management paradigms by not actively managing specific habitats or gathering areas may be similar to introducing invasive species or promoting other changes to native ecosystems.³³ Disturbance in the form of manual manipulation such as coppicing, digging roots, removing dead growth, and cultural burning—or in some cases the complete lack of these disturbances—may cause the occurrence of certain native plant species in a landscape to decline.³⁴

The establishment of NPS and U.S. Forest Service resulted in the decline and displacement of Indigenous people and the associated management of their

28. Christine Eriksen & Don Hankins, *The Retention, Revival, and Subjugation of Indigenous Fire Knowledge through Agency Firefighting in Eastern Australia and California*, 27 SOC'Y & NAT. RESOURCES 1288 (2014).

29. Diekmann et al., *supra* note 6; Wolfley, *supra* note 7.

30. Diekmann et al., *supra* note 6.

31. R. Scott Anderson & Scott Carpenter, *Vegetation Change in Yosemite Valley, Yosemite National Park, California, During the Protohistoric Period*, 38 MADRONO 1 (1991); M. Kat Anderson, *Prehistoric anthropogenic wildland burning by hunter-gatherer societies in the temperate regions: a net source, sink, or neutral to the global carbon budget?*, 29 CHEMOSPHERE 913 (1994); M. KAT ANDERSON, *TENDING THE WILD: NATIVE AMERICAN KNOWLEDGE AND THE MANAGEMENT OF CALIFORNIA'S NATURAL RESOURCES* (U. of Cal. Press, 2005); Diekmann et al., *supra* note 6; Lepofsky, *supra* note 25; Lertzman, *supra* note 19; Gregory H. Aplet & David N. Cole, *The Trouble with Naturalness: Rethinking Park and Wilderness Goals*, in *BEYOND NATURALNESS: RETHINKING PARK AND WILDERNESS STEWARDSHIP IN AN ERA OF RAPID CHANGE*, 16 (David N. Cole & Laurie Yung, eds., 2012).

32. Scott Mensing, *The History of Oak Woodlands in California, Part II: The Native American and Historic Period*, 46 CAL. GEOGRAPHER 1 (2006); NAT'L PARK SERVICE, *MERCED WILD AND SCENIC RIVER VALUES DRAFT BASELINE CONDITIONS REPORT 174-89* (2011).

33. Long et al., *supra* note 18.

34. Anderson & Carpenter, *supra* note 31.

homelands.³⁵ Decades of fire exclusion by NPS has decreased biodiversity and average tree diameter and allowed conifer encroachment and the accumulation of high fuel loads in Yosemite Valley.³⁶ Fire suppression has also resulted in the decline of traditional practices and culture.³⁷

B. The Importance of Reciprocal Relationships for American Indian Health

American Indians, as well as many other Indigenous people colonized around the world, face a higher proportion of social ills due to intergenerational trauma. American Indian young adults, aged eighteen to twenty-four, are at the highest risk of suicide with approximately 70 percent of American Indian/Alaska Native suicide deaths occurring in rural settings.³⁸ Most Indigenous people believe that their Indigeneity is defined by a strong relationship between the environment, tribe, and culture.³⁹ For many Indigenous people, a reciprocal relationship exists between the caretaking of their ancestral homelands and the support their land provides them.⁴⁰ Restoring these relationships is necessary to promote Indigenous wellbeing and health and create more resilient ecosystems with the inclusion of beneficial Indigenous land management practices.

The suppression of traditional Indigenous practices has been substituted for another type of management, perceived by the dominant culture's definition of "natural" as meaning without human presence. Psychologically, this viewpoint erases Indigenous people, leaving a skewed relationship of humans' responsibility and ability to live with nature sustainably due to the lack of awareness of traditional Indigenous management of different landscapes for thousands of years.

Many positive health benefits exist from interacting with nature, including increased physical activity and emotional and spiritual wellbeing.⁴¹ Indigenous people who were removed from their homelands and traditional gathering and

35. Lynn Huntsinger & Sarah McCaffrey, *A Forest for the Trees Forest Management and the Yurok Environment, 1850 to 1994*, 19 AM. INDIAN CULTURE & RESEARCH J. 155 (1995); Diekmann et al., *supra* note 6.

36. Anderson & Carpenter, *supra* note 31.

37. Erin Rentz, *Effects of Fire on Plant Anatomical Structure in Native Californian Basketry Materials* (2013) (M.A. thesis, San Francisco State University); Jeanine M. Pfeiffer & Elizabeth Huerta Ortiz, *Invasive Plants Impact California Native Plants Used in Traditional Basketry*, 35 FREMONTIA 7 (2007); Judee Lena Burr, *Burning across Boundaries Comparing Effective Strategies for Collaboration Between Fire Management Agencies and Indigenous Communities in the United States and Australia*, 5 OCCASION 1 (2013).

38. Rachel Leavitt, *Suicides Among American Indian/Alaska Natives — National Violent Death Reporting System, 18 States, 2003–2014*, CTR. FOR DISEASE CONTROL & PREVENTION MORBIDITY AND MORTALITY WEEKLY REPORT (Oct. 27, 2018), <https://www.cdc.gov/mmwr/volumes/67/wr/mm6708a1.htm>.

39. Mason Durie, *Understanding Health and Illness Research at the Interface Between Science and Indigenous Knowledge*, 33 INT'L J. EPIDEMIOLOGY 1138 (2004).

40. Long et al., *supra* note 18.

41. Cecily Maller et al., *Healthy Nature Healthy People Contact with Nature' as an Upstream Health Promotion for Populations*, 21 HEALTH PROMOTION INT'L 45 (2006).

food-producing areas, such as milling stations, should be afforded opportunities to reestablish these connections. Reapplying traditional burning and traditional management of culturally significant plants in public lands with the involvement of local tribes can restore the proliferation of culturally significant native species.⁴² It can also help repair Indigenous peoples' connection with their ancestral homelands and traditions as caretakers, potentially improving Indigenous health and wellbeing.⁴³

C. *Nurturing Living Cultures and Communities*

In 2016, the National Park System Advisory Board Science Committee released a statement in celebration of its hundredth year of existence. Within *Rethinking the National Parks for the 21st Century, Nurturing Living Cultures and Communities*, NPS recognized parks as Indigenous homelands and acknowledged that knowledge associated with traditional practices and spiritual sites might be forgotten as elders pass away.⁴⁴ Ensuring these unique relationships are not lost requires collaboration with living cultures and the use of sustainable cultural practices and traditions.⁴⁵ During the Obama administration, the National Park System Advisory Board Science Committee recommended that NPS preserve ecological integrity and cultural authenticity with continued traditional and sustainable use of natural and cultural resources by Indigenous communities.⁴⁶ Other advisory board recommendations included avoiding unnecessary bureaucracy in engaging networks, collaborations with academic and other federal institutions, and partnerships with tribes to manage resources across large-scale landscapes.⁴⁷

II. BASKET WEAVING: BARRIERS AND BENEFITS

Baskets can symbolically be described as nests: They hold cultural knowledge of respect for plants and animal homes as well as the customs of gathering, processing, and the skill of weaving and twining essential for future generations.⁴⁸ Basketry is a cultural art in danger of disappearing along with the biodiversity of traditional gathering areas due to the exclusion of cultural burns

42. Durie, *supra* note 39.

43. *Id.*

44. Rita Colwell et al., *Revisiting Leopold Resource Stewardship in the National Parks*, 20 PARKS 15 (2014).

45. Nat'l Park Service, *Rethinking the National Parks for the 21st Century* (Feb. 15, 2017), <https://www.nps.gov/policy/report.htm>.

46. Colwell et al., *supra* note 44.

47. *Id.*

48. BRIAN BIBBY, *PRECIOUS CARGO: CALIFORNIA INDIAN CRADLE BASKETS AND CHILDBIRTH TRADITIONS*, 69 (Heyday Books, 2004).

and harvesting.⁴⁹ Restoring native plants for basketry and traditional purposes encourages a biodiverse landscape, enabling cultural transmission to occur.⁵⁰

A. Barriers to Basket Weaving

Plants used for basketry are in decline, as are the qualities that make them useful.⁵¹ Fire exclusion, or the de facto policy of avoiding and eliminating fires, and the suppression of traditional burning practices in California have inflicted a tremendous toll on the biodiversity of the landscape and culturally utilized plants.⁵² Without active management, some basketry plants may no longer be usable;⁵³ traditional ecological management and basketry knowledge may soon cease to exist after the passing of elders. Basket weavers face many obstacles, including those related to access, the inability to manage and harvest plants in Indigenous homelands on private and public lands, and the application of pesticides sprayed to eliminate invasive plants.⁵⁴

The application of pesticides poses a significant threat to weavers as most material is handled with the hands and mouth.⁵⁵ When plants are exposed to chemicals and potentially used by weavers, baskets are poisoned from the beginning. The California Indian Basketry Association is entirely against the application of chemicals on plants as the effects have caused an increased presence of cancerous sores around weavers' mouths.⁵⁶ Pesticide application is of utmost concern if the intended purpose of the plant is to construct a cradle or mat for infant care. Cradles have both functional and symbolic importance, as they solidify familial relationships and tribal worldviews.⁵⁷ Despite their importance, or perhaps because of it, in 1916 the DOI discouraged Native American use of cradleboards under the guise of health and safety, with undertones of racial superiority and encouraging assimilation.⁵⁸ But the

49. Pfeiffer & Ortiz, *supra* note 37.

50. Daniela Shebitz, *Weaving Traditional Ecological Knowledge into the Restoration of Basketry Plants*, 9 J. ECOLOGICAL ANTHROPOLOGY 51 (2005); Robin Kimmerer, *Restoration and reciprocity: the contributions of traditional ecological knowledge*, in HUMAN DIMENSIONS OF ECOLOGICAL RESTORATION 257–76 (Island Press, 2011).

51. M. Kat Anderson, *California's Endangered Peoples and Endangered Ecosystems*, 21 AM. INDIAN CULTURE & RES. J., 7 (1997); Shebitz, *supra* note 50; Pfeiffer & Ortiz, *supra* note 37; Lepofsky, *supra* note 25.

52. Robert E. Keane et al., *Cascading Effects of Fire Exclusion in Rocky Mountain Ecosystems: A Literature Review*, U.S. FOREST SERV. (May 2002); Underwood, *supra* note 24.

53. Anderson & Carpenter, *supra* note 31.

54. Pfeiffer & Ortiz, *supra* note 37.

55. Elizabeth Kallenbach, *The California Indian Basketweavers Association: Advocates for the Use of Museum Collections by Contemporary Weavers*, 3 MUSEUM ANTHROPOLOGY REV. 1 (2009).

56. Pfeiffer & Ortiz, *supra* note 37; *see also* Jeanine M. Pfeiffer & Robert Voeks, *Biological invasions and biocultural diversity: linking ecological and cultural systems*, 35 ENVTL. CONSERVATION 281 (2008).

57. BIBBY, *supra* note 48.

58. *See* U.S. DEP'T OF THE INTERIOR OFFICE OF INDIAN AFFAIRS, INDIAN BABIES: HOW TO KEEP THEM WELL, (Wash. Gov't Printing Office, 1916) (covering assimilation policies enacted by the U.S. government forbidding American Indians from practicing their religions, languages, and cultures); J.

revitalization of the use of cradleboards is obvious today, and they continue to be used at gatherings and ceremonies,⁵⁹ further demonstrating the importance of access to the quality plant material necessary for basketry and cultural continuance.⁶⁰

Basketry revitalization efforts started in the 1990s with the foundation of the California Indian Basketry Association,⁶¹ but organizations like this face significant barriers to federal funding that could and should support this type of revitalization. For example, NPS awards cultural revitalization grants that focus on maintaining identified historic cultural landscapes. But these grants are only available to federally recognized tribes, like many other scholarships, healthcare benefits, and jobs within the DOI.⁶² Many American Indian people in non-federally recognized tribes face harsher realities simply due to the added burden of proving the existence of their tribe to OFA while also combating the same social ills from intergenerational trauma⁶³ that members of federally recognized tribes face.⁶⁴ Those in non-federally recognized tribes are ineligible to receive services from the Bureau of Indian Affairs and also lack the benefits of recognized sovereignty, self-determination, and added abilities for economic development.⁶⁴

B. Basket Weaving as Traditional Ecological Knowledge

TEK is time-tested knowledge passed down from generation to generation that is usually localized, containing spiritual beliefs about relationships and responsibilities to the earth and creation.⁶⁵ To be transmitted, TEK must be practiced so that it can be continually generated. TEK remains among basket weavers because of the techniques passed down through generations and the close relationships that exist between weavers and the environment.⁶⁶ Weavers who rely on specific plants for their traditions are often early to notice declines

David Hacker & Michael Haines, *American Indian Mortality in the Late Nineteenth Century: the Impact of Federal Assimilation Policies on a Vulnerable Population*, 110 ANNALES DE DÉMOGRAPHIE HISTORIQUE 17 (2005).

59. Chelsey Luger, *The Ancient Native American Baby Carrier Is Making a Comeback*, BREWMINATE (Jan. 5, 2018), <https://brewminate.com/the-ancient-native-american-baby-carrier-is-making-a-comeback/>.

60. J. Aldern & R. Goode, *Indigenous Fire, Land, Water, Art, and Education*, THE COMPARATIVE WESTS PROJECT (Mar. 3, 2019), <http://comparativewests.stanford.edu/content/indigenous-fire-land-water-art-and-education>.

61. Kallenbach, *supra* note 55.

62. U.S. Dep't of Interior Bureau of Indian Affairs, *Office of Federal Acknowledgment (OFA) Indian Affairs*, (Oct. 26, 2018), <https://www.bia.gov/as-ia/ofa>.

63. Claradina Soto et al., *Stressful life events, ethnic identity, historical trauma, and participation in cultural activities: Associations with smoking behaviors among American Indian adolescents in California*, 50 ADDICTIVE BEHAVIORS 64 (2015); MILLER *supra* note 11.

64. MILLER, *supra* note 11.

65. GREGORY CAJETE, NATIVE SCIENCE NATURAL LAWS OF INTERDEPENDENCE 269 (2002); Kimmmerer, *supra* note 50.

66. Shebitz, *supra* note 50.

in plant populations.⁶⁷ Incorporating TEK into research and resource management can improve the restoration of native plants as it is empirically based and useful to understand and predict environmental events.⁶⁸

Many culturally significant plants require the use of fire or active management and manipulation to enhance their abundance and quality as well as to reduce the effects of pests.⁶⁹ The quality of basketry materials perceived by weavers reflects the health of an ecosystem, as weavers are intimately aware of their gathering sites through years or generations of use and observation.⁷⁰ Cultural burning and active support of gathering practices by local tribes promotes cultural continuance.⁷¹

Some plants were possibly shaped evolutionarily for specific qualities by coppicing, pruning, tilling, sowing, and burning,⁷² and can be restored and used for their traditional properties. The degree of Indigenous peoples' anthropogenic intervention with plants and landscapes is underestimated.⁷³ In California, 75 percent of plant material items manufactured by Sierra Miwok, Western Mono, Foothill Yokuts, Tubatulapa, Southern Maidu, Washoe, and Paiute tribes were made with epicormic branches and shoots—or dormant or adventitious buds that often develop from exposure to light and fire effects—from diverse native species.⁷⁴

Fire exclusion and the natural succession of meadows, wetlands, valley grasslands, coastal scrublands, and forest ecotypes have degraded the habitat of basketry plants as well as the Indigenous cultural customs that depend on these

67. See Berkes, *supra* note 16; Zachary H. Hart et al., *Community Participation in Preservation of Lowcountry South Carolina Sweetgrass (Muhlenbergia filipes [M. A. Curtis] J. Pinson and W. Batson) Basketry*, 58 *ECONOMIC BOTANY* 161–71 (2004).

68. Henry P. Huntington, *Using Traditional Ecological Knowledge in Science Methods and Applications*, 10 *ECOLOGICAL APPLICATIONS* 1270, 1270 (2000); Shebitz, *supra* note 50; S. HUMMEL ET AL., U.S. DEP'T OF AGRICULTURE, GEN. TECH. REP. PNW-GTR-912, *USING FOREST KNOWLEDGE: HOW SILVICULTURE CAN BENEFIT FROM ECOLOGICAL KNOWLEDGE SYSTEMS ABOUT BEARGRASS HARVESTING SITES* (2015); Lertzman, *supra* note 19.

69. See M. Kat Anderson, *The Fire, Pruning, and Coppice Management of Temperate Ecosystems for Basketry Material by California Indian Tribes*, 27 *HUMAN ECOLOGY* 79, 83 (1999); Long et al., *supra* note 18; Frank K. Lake, *Traditional Ecological Knowledge to Develop and Maintain Fire Regimes in Northwestern California, Management and Restoration of Culturally Significant Habitats* (2007) (unpublished Ph.D. dissertation, Oregon State University); Aldern & Goode, *supra* note 60; Hankins, *supra* note 25; see generally *FIRE, NATIVE PEOPLES, AND THE NATURAL LANDSCAPE* (Thomas Vale ed., 2002).

70. Pfeiffer & Ortiz, *supra* note 37.

71. Shebitz, *supra* note 50.

72. See M. Kat Anderson & Michael J. Moratto, *Native American land-use practices and ecological impacts*, in *SIERRA NEVADA ECOSYSTEM PROJECT: FINAL REPORT TO CONGRESS 199*, 201 (U. of Cal. Davis Ctr. for Water and Wildland Resources, 1996).

73. See, e.g., Dana Lepofsky & Ken Lertzman, *Documenting ancient plant management in the northwest of North America*, 86 *BOTANY* 129, 130 (2008).

74. Anderson, *supra* note 31.

ecosystems.⁷⁵ The modification of site conditions in the absence of periodic burning can cause type-conversion with forest fires that burn more intensely and severely.⁷⁶ Wetlands are often filled with organic matter, rendering sites less suitable for traditional ecological and utilitarian purposes.⁷⁷ Plants such as willow or sour berry that go untended become unusable for weavers to make cradles and other baskets.⁷⁸

III. CONTRADICTIONS IN REGULATIONS

The Gathering Rule enacted in 2016 replaced local agreements that previously allowed traditionally associated non-federally recognized tribal members to gather traditionally utilized plants for cultural purposes.⁷⁹ The final rule limits plant gathering for traditional use to federally recognized tribes whose ancestral lands are now within national parks.⁸⁰ This adds further bureaucratic obstacles for recognized tribes, and it makes gathering completely illegal for non-federally recognized tribes, potentially resulting in citations for tribal members born in Yosemite Valley. The new regulation requires federally recognized tribes to initiate a request demonstrating their association with the park to the superintendent, which may then be directed to the regional director.⁸¹ Requesting tribes must describe how they identified individual gatherers and specify which plants or plant parts they wish to gather, as well as the locations, timing, and processes involved in collecting.⁸² The federally recognized tribes and the NPS must then conduct an Environmental Assessment with a Finding of No Significant Impact (FONSI) under NEPA.⁸³

A. Challenges that NPS Regulations Present

The NPS Organic Act was written in 1916 with a set of values predicated on the myth of pure nature as free from human influence,⁸⁴ allowing for very

75. M. Kat Anderson, *The Ethnobotany of Deergrass, Muhlenbergia rigens (Poaceae) Its Uses and Fire Management by California Indian Tribes*, 50 *ECONOMIC BOTANY* 415–18 (1996); Pfeiffer & Ortiz, *supra* note 37.

76. Anderson, *supra* note 31.

77. *Id.*

78. Aldern & Goode *supra* note 25.

79. 81 Fed. Reg., at 45024.

80. *Id.*

81. *Id.* From 2010–2016, Superintendent Don Neubacher worked beneath his wife Patty Neubacher, the deputy regional director of the Pacific West Region. Louis Sahagun, *Federal official retires amid allegations she shielded her husband in Yosemite harassment scandal*, L.A. TIMES (Oct. 3, 2016, 2:00 PM), <https://www.latimes.com/local/california/la-me-nps-resignation-20161003-snap-story.html>.

82. 81 Fed. Reg., at 45024. *See, e.g.*, PATRICIA L. PARKER & THOMAS F. KING, U.S NAT'L PARK SERV., O-335-935 QL 3, GUIDELINES FOR EVALUATING AND DOCUMENTING TRADITIONAL CULTURAL PROPERTIES 6 (1992).

83. 81 Fed. Reg., at 45024.

84. Interview by Irene A. Vasquez with American Indian Cultural Liaison Eirik Thorsgard (2018) (discussing the Nat'l Park Serv. Organic Act and its limitations).

limited consumptive use—no more than a handful of natural resources.⁸⁵ Unfortunately, more than a handful is required to make most baskets, tule mats, and cradles, which need at least two hundred straight shoots.⁸⁶ The Organic Act is thus both prohibitive of the continuation of basketry and does not meet its mandate to conserve natural and cultural resources unimpaired for future generations if such resources cannot be stewarded for their traditional qualities by Indigenous peoples.

Multiple, interwoven pathways including deductive, discipline-specific, and quantitative means as well as inductive, holistic, and qualitative means inform ecological knowledge for tribal and non-tribal natural resource managers.⁸⁷ Native science can be described as holistic, interrelated, and non-quantifiable,⁸⁸ although many weavers know the amount of material required for specific projects. Both knowledge systems are based on empirical observations, but Native science also contains a connection to spirit and a belief in the importance of reciprocity among humans and other beings.⁸⁹ It is preferable when western science and Native science support specific ecological restoration goals, but when these differ, as they often do when restoration projects omit the restoration of native plant species for specific basketry qualities, where does that leave Native science? Each land management agency has its own policies concerning conservation, but overwhelmingly the agencies lack an appreciation for Indigenous perspectives in relation to the land and creation.⁹⁰ Popular thought is changing with more research and educational programs such as *Tending Nature*,⁹¹ but institutional ignorance of Indigenous stewardship continues,⁹² creating the false ideology that our public lands and wilderness areas were free of human influence or impact.

The intrusive effects of researchers from public land agencies and other institutions mining traditional knowledge to base the Gathering Rule's limit on taking of gathered native plants⁹³ are insensitive to Native Americans, whose traditional knowledge is already scrutinized. Western science and values take precedence over TEK when a limit of take ultimately relies on western science perspectives, values, and institutions that tend to separate humans and the

85. See NAT'L PARK SERV., MANAGEMENT POLICIES 2006.

86. Interview by Irene A. Vasquez with Native American educator Diana Almendariz (2018).

87. See John Bussey et al., "A Lot of It Comes from the Heart" *The Nature and Integration of Ecological Knowledge in Tribal and Nontribal Forest Management*, 114 J. FORESTRY 97, 97 (2015).

88. See, e.g., Bussey et al., *supra* note 87, at 98 (characterizing TEK as "holistic, integrated, and spiritual").

89. Cajete, *supra* note 65.

90. Kurt E. Dongoske et al., *The National Environmental Policy Act (NEPA) and the Silencing of Native American Worldviews*, 17 ENVTL. PRAC. 36, 36 (2015).

91. Chris Clarke, *Untold History The Survival of California's Indians*, KCET (Sept. 26, 2016), <https://www.kcet.org/shows/tending-the-wild/untold-history-the-survival-of-californias-indians>. *Tending Nature* is a relatively new series that helps educate about traditional Indigenous plant and land management. *Id.*

92. Dongoske et al., *supra* note 90.

93. 81 Fed. Reg., at 45024.

environment instead of promoting healthy reciprocal relationships between humans and the environment.⁹⁰ How does something remain sacred if it must be shared with bureaucrats? Some species and uses are known only to certain individuals, handed down to them through their ancestral line or in ceremony, making the divulging of such information inappropriate.⁹⁴ Weavers are very secretive about their gathering locations to protect those locations and because of the many different public and private land management regulations of gathering.⁹⁵ Many weavers have had to gather with discretion because of the belief held by mainstream society that any collection of native plants can harm their reproduction, as described in the language of the Organic Act.⁹⁶

The requirement that federally recognized tribes complete an Environmental Assessment without specified funds further disenfranchises those tribes without robust financial resources. NPS may want to rethink the Gathering Rule quickly as the enforcement of this rule may lead to serious outcomes relating to the citation of tribal members who are unaware of the rule or defiant of further policies aimed at Indigenous removal and erasure. Furthermore, this regulation may appear to many Native people to be more “red tape” from the federal government infringing upon the spiritual and religious practices of American Indians.

The NPS Gathering Rule may further prevent gatherers from disclosing their locations due to the general lack of trust between American Indians and the federal government.⁹⁷ This rule may also prevent new weavers from learning plant gathering knowledge, because the rule requires tribes identify gatherers, while also ignoring tribal customs and relations.⁹⁸ Weavers who have married in or have been adopted into tribes whose ancestral lands now make up national parks are essentially banned from gathering. Had this rule been in place and reinforced, master weavers like Dr. Julia Parker, a cultural demonstrator for over sixty-five years at Yosemite National Park, would have been prohibited from collecting in her husband’s place of birth and ancestral homeland.⁹⁹

NPS’s most recent document concerning Native Americans favors a hands-off approach to conservation.¹⁰⁰ In *2006 Native Americans and NPS Management Policies*, the wording to “ensure that conservation will be predominant when there is a conflict between the protection of resources and their use” demonstrates this hands-off approach.¹⁰¹ If the impairment of the

94. Bussey et al., *supra* note 87, at 98.

95. Pfeiffer & Ortiz, *supra* note 37.

96. See NAT’L PARK SERV., *supra* note 85.

97. Native American Rights Fund, *Hold Governments Accountable to Native Americans*, <https://www.narf.org/our-work/accountability-governments/> (last visited Nov. 19, 2019).

98. *Id.*

99. Gina Clugston, *Julia Parker Basket Collection Donated By Bay Area Philanthropist*, SIERRA NEWS ONLINE (May 6, 2016, 4:18 PM), <https://sierranewsonline.com/julia-parker-basket-collection-donated-by-bay-area-philanthropist/>.

100. See NAT’L PARK SERV., *supra* note 85.

101. *Id.*

resource is occurring due to its lack of use—in other words, maintenance and gathering—then the interpretation of conservation as strict preservation is detrimental to the resource, as some plants require a disturbance regime to proliferate.¹⁰² As Merv George, Jr., an Indigenous Yurok U.S. Forest Supervisor, said, “some things can be protected to death.”¹⁰³ Indigenous understandings of nature include the responsibility to maintain natural resources through responsible use and care to help perpetuate those resources into the future.¹⁰⁴ If we do not continue traditional maintenance, then the plants become unusable and “go away,”¹⁰⁵ as many gatherers can attest, plants’ abundance or quality are already decreasing.¹⁰⁶

B. *Marginalizing Indigenous Voices in Land Management*

Restoring Indigenous reciprocal relationships is necessary to allow for the transmission and generation of Indigenous Knowledge, because Indigenous people hone and pass on knowledge through engaging in traditional management.¹⁰⁷ Indigenous perspectives have too long been absent from federal land management decisions.¹⁰⁸ The separation of the “civilized” man from nature continues in geographic thought and has only recently been challenged in modern academic writings about Indigenous relationships with nature by mostly non-Indigenous voices.¹⁰⁹ The voices of traditionally associated Indigenous people must be heard and integrated into park management if NPS is to achieve engaged stewardship and indeed preserve natural and cultural resources into its second century of existence. The lack of inclusive voices is not only an issue in U.S. governmental institutions, but within the environmental field as well. White, ethnocentric ideals of preserving land without human influence are detrimental not only to society but also to our environment because no management is without human influence.¹¹⁰

Rescinded in 2017, NPS Director’s Order 100, *Resource Stewardship for the 21st Century*, included statements indicating a commitment to ensuring Indigenous practices could continue uninhibited by overly burdensome bureaucratic requirements.¹¹¹ The contradiction of these and other statements

102. Shebitz, *supra* note 50.

103. Interview by Irene A. Vasquez with Indigenous Yurok U.S. Forest Supervisor Merv George, Jr. (2017).

104. Kimmerer, *supra* note 50.

105. Phone Interview by Irene A. Vasquez with Chumash cultural educator and basketweaver Tima Link (2018).

106. Pfeiffer & Ortiz, *supra* note 37.

107. Bussey et al., *supra* note 87, at 104.

108. Huntsinger & McCaffrey, *supra* note 35.

109. Jay T. Johnson & Brian Murton, *Replacing Native Science Indigenous Voices in Contemporary Constructions of Nature*, 45 GEOGRAPHICAL RESEARCH 121–22 (2007).

110. Lertzman, *supra* note 19.

111. NAT’L PARK SERV. DIRECTOR’S ORDER #100: RESOURCE STEWARDSHIP FOR THE 21ST CENTURY (2016) (note this order was rescinded on Aug. 16, 2017).

made by NPS concerning the Gathering Rule ignores the established relationships with non-federally recognized tribes that existed prior to NPS's establishment. Indigenous Knowledge cannot be implemented without Indigenous people. The general impression I have formed from managerial interviews¹¹² is that so far only a handful of projects have involved tribal communities in the restoration of native plants for recognized ethnohistoric landscapes, not specifically for cultural use. This quote sums up my experience working with ecological restoration and classroom perspectives on environmental restoration seeking to restore natural processes, not for cultural use:

There are partnerships that have been developing, especially historic preservation with archeology . . . Then firefighting, they help each other with the prescribed burning on both Forest Service and Tribal lands . . . But, that doesn't cover all the bases. That doesn't cover gathering traditional resources and identifying and evaluating those resources. They avoid that issue of evaluating our traditional resources.¹¹³

Over the long term, the inclusion of more Indigenous staff in public land management agencies can help integrate knowledge generation and transmission.¹¹⁴

As it stands, the prohibitive laws meant to protect native plants threaten biodiversity and endanger American Indian cultures. Within these endangered cultures are Native American people whose health and wellbeing are enhanced with traditional cultural practices and foods that support physical, mental, spiritual, and emotional health; TEK; and language revitalization efforts.¹¹⁵ By promulgating the Gathering Rule, NPS has ignored the Indigenous relationships that preexisted NPS's creation and ignored the difficult and highly biased federal acknowledgment process.¹¹⁶ The requirement that Native gatherers complete NEPA processes demonstrates a lack of understanding of Indigenous knowledge of and approaches to management of humans and the environment.¹¹⁷ The Gathering Rule is not only contradictory to NPS's statements and mission, it is also an environmental injustice, because it disallows Indigenous peoples' inherent rights of environmental stewardship. Indigenous people continue to exist whether the federal government acknowledges us or not.

National parks were created at the expense of American Indians. The impact of the perspectives of conservationist and Sierra Club founder John Muir, and of the eugenicist and slave owner Joseph LeConte, led to Indigenous assimilation

112. Interviews by Irene A. Vasquez with public land agency staff members (2017–2018) (discussing whether restoration of native plants for cultural purposes is occurring).

113. Bussey et al., *supra* note 87, at 105.

114. *Id.*

115. Long et al., *supra* note 22.

116. MILLER, *supra* note 11.

117. Dongoske et al., *supra* note 90.

and removal from national parks.¹¹⁸ Western concepts of protection have harmed Indigenous cultures and decreased biodiversity around the world.¹¹⁹ Policies aimed at Indigenous removal are sadly still being implemented a century later with the Gathering Rule. For DOI officials to feign ignorance of their own history of removal and previous federal policies towards American Indians is wrong.

C. Growing Awareness

The effects of fire exclusion are now widely known. The ecological effects of the removal of Indigenous people and the loss of biodiversity are beginning to be known by the wider public due to research findings and publications,¹²⁰ and as concern grows over the effects of a changing climate on biodiversity and human environments.¹²¹ Forced removal, assimilation policies, child separation, and the resulting social ills are also widely known.¹²² The Gathering Rule creates added bureaucratic obstacles to traditionally associated tribes and peoples' continuing of their culture and responsibility in caring for ancestral and family gathering areas. The contradictory statement made about the stewardship of the national parks and the Gathering Rule are nothing new to Native American people. As my grandmother said about newspaper articles written about Native Americans, "they like to contradict themselves."¹²³ How many years must pass before endangered species, cultures, and languages can live?

Erasing Indigenous presence has been perpetrated in the interpretation of the park's history and replacement of peak names—renamed from Indigenous names such as pohono or puhunu,¹²⁴ relating to wind spirit in Southern Sierra Miwuk, to European names like Bridalveil Falls, ignoring the archeological evidence and first Indigenous names of these places.¹²⁵ But this language erasure is slowly changing as more inclusive perspectives are being integrated into the education and interpretation of our public lands.

118. Zachary Warma, *The Golden State's Scientific White Supremacist*, BOOM CAL. (Nov. 5, 2018), <https://boomcalifornia.com/2018/11/05/the-golden-states-scientific-white-supremacist>.

119. Stanley Stevens, CONSERVATION THROUGH CULTURAL SURVIVAL: INDIGENOUS PEOPLES AND PROTECTED AREAS 142 (1997).

120. Erik M. Johnson, *How John Muir's Brand of Conservation Led to the Decline of Yosemite*, SCIENTIFIC AMERICAN (Aug. 13, 2014), <https://blogs.scientificamerican.com/primatologists/how-john-muir-s-brand-of-conservation-led-to-the-decline-of-yosemite/>.

121. Garrit Voggesser et al., *Cultural impacts to tribes from climate change influences on forests*, 12 CLIMATIC CHANGE 615, 615 (2013).

122. See Maria Yellow Horse Brave Heart et al., *Historical Trauma Among Indigenous Peoples of the Americas: Concepts, Research, and Clinical Considerations*, 43 J. PSYCHOACTIVE DRUGS 282–90 (2011).

123. Interview by Irene A. Vasquez with Peggy Beale (2018). J.E. Hanna, *Yosemite Indian Fade to Small Band of Barred Indians*, S.F. EXAMINER, Oct. 2, 1927, at B2 (providing insight into long held contradictory statements regarding Native Americans).

124. SYLVIA M. BROADBENT, *THE SOUTHERN SIERRA MIWOK LANGUAGE* (1964).

125. See generally LaDuke, W., *Recovering the sacred: The power of naming and claiming* (2005); Carmen George, *American Indians Share Their Yosemite Story*, FRESNO BEE (June 27, 2014, 10:34 PM), <https://www.fresnobee.com/news/special-reports/yosemite-at-150/article19521750.html>.

CONCLUSION

Yosemite National Park Service removed the last American Indian village in the late 1960s.¹²⁶ Today these people, my elders and grandmother's generation, live mostly in the communities bordering Yosemite National Park.¹²⁷ No longer able to live in a village near relatives who raise each other's children as their own, our culture has changed. Children are raised in individualized homes spread across the county and state, creating individualism and divisiveness, a goal of assimilation policies.¹²⁸ Whether younger generations can bridge this divide, mainly living in poor rural areas, is difficult to say.

The federal recognition process is meant to disenfranchise tribes.¹²⁹ Non-federally recognized tribes face the same health disparities as federally recognized tribes but without the resources and ability to apply for specific federal grants aimed at improving health, revitalizing cultures, and restoring traditional land management. Further research could look at the poverty levels and health disparities among federally recognized tribes compared to that of non-federally recognized, petitioning tribes. Tribes such as mine, the Southern Sierra Miwuk Nation, which has been petitioning for federal recognition for close to forty years (since 1982), exist in limbo without acknowledgement or justice. Tribal elders have sought justice and federal recognition through previous avenues through NPS and other organizations and agencies since the 1970s—in essence since the first treaties were signed in the 1860s.¹³⁰ These treaties signed by 134 bands ceded millions of acres throughout California but were never ratified by Congress and were hidden away until 1905.¹³¹ Today, Indian Trust Lands constitute 540,473 acres, less than 1 percent of the total area in California.¹³² Living without access to sacred sites on private property or ownership of ancestral territories, where land was stolen for some elders only two generations prior, and without federal recognition does not help sustain Native American people. California currently has 109 federally recognized tribes and 78 entities petitioning in California,¹³³ and is unique because it is home to the largest population of Native American people in the United States. Landless

126. See generally PETER BROWNING, *YOSEMITE PLACE NAMES: THE HISTORIC BACKGROUND OF GEOGRAPHIC NAMES IN YOSEMITE NATIONAL PARK* (2005); REBECCA SOLNIT, *SAVAGE DREAMS: A JOURNEY INTO THE HIDDEN WARS OF THE AMERICAN WEST* (2014).

127. LaDuke, *supra* note 125.

128. NORTHERN PLAINS RESERVATION AID, *Native American History and Culture Boarding Schools*, http://www.nativepartnership.org/site/PageServer?pagename=airc_hist_boardingschools (last visited Nov. 19, 2019).

129. MILLER, *supra* note 11.

130. Larisa K. Miller, *The Secret Treaties with California's Indians*, 45(3-4) PROLOGUE-Q, NAT'L ARCHIVES & RECS. ADMIN. 36 (2013).

131. *Id.*

132. ROBERT F. HEIZER & ALBERT B. ELSASSER, *THE NATURAL WORLD OF THE CALIFORNIA INDIANS* (1980).

133. JUDICIAL COUNCIL OF CALIFORNIA, *California Tribal Communities*, <http://www.courts.ca.gov/3066.htm> (last visited Apr. 8, 2020).

American Indians have trouble continuing their traditional land management practices not only because of federal and state jurisdictions, regulations, and laws, but also due to poverty and other effects of oppression.

Elders born in Yosemite Valley continue to pass away without any acknowledgment of their existence or rights in their ancestral homelands. This injustice is not only social but environmental. Tribes like mine are not allowed to continue our cultural traditions of gathering plants, suppressing our relationship with our ancestral and spiritual lands. The ecological consequences of banning Indigenous tending practices cannot be fully quantified as so much of California's landscape has been drastically altered. Much like Native Americans managed the landscape for food and resource availability, NPS and other public land agencies are managing these landscapes, but not naturally. Traditional land management strategies should be included—if not heavily featured—in NPS goals and objectives.

With time, greater recognition of public and private lands as Indigenous homelands will encourage traditional uses of natural resources, creating heterogeneous landscapes with greater biodiversity and ecosystem resilience, necessary in a rapidly changing world. Indigenous tribes are working to revitalize our cultures, languages, and relationships with the land and with each other. Managing plants for cultural and ceremonial uses already occurs on tribal lands. Tribes will continue developing economically, educationally, and institutionally, seeking justice for all creation. The recognition of Yosemite Valley's prior management by Ahwahneechees will eventually come to light as descendants like myself continue working to protect our home because of our inherent responsibility to our ancestors and to future generations. *Miw'uu attik' uchup* (Our people still live), is a continuing story of resilience.

