With Fire: Living as Guests On Unceded Indigenous Homelands (In California) And Architectural Praxes For Collective Futures.

Anousheh G. Kehar

TECHNISCHE UNIVERSITÄT WIEN

D I S S E R T A T I O N

With Fire: Living as Guests On Unceded Homelands (in California) and Architectural Praxes for Collective Futures

ausgeführt zum Zwecke der Erlangung des akademischen Grades einer

Doktorin/eines Doktors[1] der Technischen Wissenschaften/Sozial- und Wirtschaftswissenschaften[1] Architektur/Raumplanung und Raumordnung[1] unter der Leitung von

Univ.Prof. Dott.arch. Wilfried Kuehn

E253-03/Raumgestaltung und Entwerfen

Institut für Architektur und Entwerfen

Dr. Ruth Wilson Gilmore

Begutachtung durch

Dr. Swati Chattopadhyay

Prof. Dr. phil. habil. Sabine Knierbein

Dr. Godofredo Enes Pereira

eingereicht an der Technischen Universität Wien

Fakultät für Architektur und Raumplanung

von

Anousheh Gul Kehar

[redacted]

Wien, am Datum *Unterschrift*

[1] nicht zutreffendes entfernen

Supervisory Committee

Univ.Prof. Dott.arch. Wilfried Kuehn
Research Unit of Spatial Design [Raumgestaltung und Entwerfen]
Faculty for Architecture and Planning, Vienna University of Technology [TU Wien]
Karlsplatz 13/E253-3, 1040 Vienna, Austria
wilfried.kuehn@tuwien.ac.at

Dr. Ruth Wilson Gilmore
Professor of Earth & Environmental Sciences, and American Studies,
The Graduate Center
City University of New York
365 Fifth Avenue, New York, NY 10016, USA
rgilmore@gc.cuny.edu

Dr. Swati Chattopadhyay
Department of the History of Art & Architecture
University of California Santa Barbara
Arts 1234, University of California, Santa Barbara, California 93106-7080, USA
swati@arthistory.ucsb.edu

Dr. Godofredo Enes Pereira
Head of Programme for Environmental Architecture
Royal College of Art
Kensington Gore, London SW7 2EU
godofredo.pereira@rca.ac.uk

Prof. Dr. phil. habil. Sabine Knierbein
Associate Professor for Urban Culture and Public Space
Head of the Interdisciplinary Centre for Urban Culture and Public Space
Faculty of Architecture and Planning, Vienna University of Technology [TU Wien]
Karlsgasse 11, A-1040 Vienna, Austria
sabine.knierbein@tuwien.ac.at

Acknowledgments

I am grateful to so many people who have enabled me to begin and finish the dissertation. Those at the Institute for Contemporary Art IZK in Graz–faculty, colleagues, guests, and students over the years–I am truly indented to you all. My PhD cohort at the Raumgestaltung und Entwerfen (Research Unit of Spatial Design) for sharing their inspiration and steadfastness. My supervisors Wilfried Kuehn and Ruthie Gilmore, for their unbound compassion and trust without which this could not have come into fruition in the ways it has, and for inspiring me to push boundaries and continue dreaming. Dr. Swati Chattopadhyay for her especially generous encouragement, guidance, and insightful conversations. Dr. Brenna Bhandar for believing in the work. Dr. Rose Beth Middleton Manning for offering plentiful resources, knowledge, and insight, her time to discuss the challenges I faced in the work, think through details, to help me understand how to respectfully center and study the work Native fire practitioners do, for inviting me as a visiting researcher–for all that goes beyond kindness. Chairman Ron Goode (North Fork Mono) for his tireless engagement and precious time for Zoom conversations, constantly sharing papers and names of people I may find interesting, for his trust, for inviting me to cultural burning workshops, for all the stories, for sharing his truly endless knowledge, creativity, and insights, for teaching me to be confident in challenging perspectives, i.e., to figure out how to approach good fire and share it with others, for teaching me that fire is about water is about life.

I am thankful to my professors, lecturers, examiners, and all who have invited me to discuss and write, formally or informally, in Graz, Vienna, California, and elsewhere, and who supported the work in so many different ways as I was constructing the project. I am thankful to the Faculty of Architecture and Planning at the Vienna University of Technology [TU Wien] for the Grant for PhD theses and specialist courses abroad (KUWI) which funded my research visit to the University of California at Davis and the Cultural Burning Workshop in Mariposa.

None of this would have been possible without my most cherished friends and family carrying me through it. Andreas Boden, Charlie Park, Gissette Padilla, Budour Khalil, Katharina Oke, Barbara Seyerl, and my parents, siblings, nieces, and

nephews: Ismat, Adnan, Amna, Jawad, GR, Aisha, Ameerah, Elias, Alina, Hana, Layla, Salman. I dedicate the work to Bashir who teaches me hope.

Abstract

Fire regimes vary from place to place, existing differently in biomes across forests, savannahs, grasslands, and shrublands.[1] On the occupied Indigenous homelands called *California*, fire's life-giving capacities are emphasized under Indigenous stewardship practices of cultural burning defined as the "[intentional] use of fire by a cultural group (e.g., family unit, Tribe, clan/moiety, society) for a variety of purposes and outcomes."[2] Understanding cultural burning by Indigenous fire practitioners as a practice of sovereignty, the project centers it to reconsider designing—i.e., thinking with fire for reimagining settler relations outside of colonial models with those whose homelands are settled on. From Architecture, while thinking across Geography and Native Studies, the project highlights and develops ways of reimagining collective futures.

Cultural burning, an aspect of Indigenous stewardship, once shaped life from the immediate to broader environments. However, this is not the case under US governance, where fire's destructive capacities are at the forefront. The project analyzes this shift from *living with fire* to the current *threat of wildfires*. In doing so, it confronts an array of settler-colonial, capitalist, and carceral practices stretched temporally. Entrenched within the different social and spatial environments created in this way, I recognize a commonality of land, water, meadows, trees, people and more, determined as commodity: the values are re-formed and re-produced by varying forces overtime. I analyze how select places in California—built, abandoned, razed—are commodified and demarcated by settler-colonial, capitalist, and carceral logic. Specifically, by studying relations of *wildlands* and the *wildland-urban* interface. The *wildland-urban interface* is an abstract place, nonetheless, described as "where humans and their development meet or

[1] The abstract is a modified version of the one published on the Raumgestaltung und Entwerfen website. Anousheh Kehar, "Notes on Processes of Unearthing: Wildfires and the Entanglements of Space," Raumgestaltung und Entwerfen, https://raumgestaltung.tuwien.ac.at/dokumentation/notes-on-processes-of-unearthing/

[2] Jonathan W. Long, Frank K. Lake, and Ron W. Goode. "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA." *Forest Ecology and Management* 500 (2021): 2. https://doi.org/10.1016/j.foreco.2021.

intermix with wildland fuel."[3] It coalesces with *wildfires* and animates the landscapes as the *wildfire crisis*. The majority of state approaches to what is dubbed the *wildfire crisis* in the *wildland-urban interface* are dominated, *and limited*, by desires of capital accumulation. These continue expanding the wealth of a handful of entities ranging from public to private, at the expense of people and places—especially those most socially, economically, environmentally vulnerable. I argue that the *solutions* and subsequent processes put forward within the bounds of capital accumulation create *false hope* and pander to and perpetuate ideas of the impossibility of collectively safe futures. Differently put, I argue that capital accumulation continuously poses a risk to collective futures.

To better understand why types of fires happen where they happen, I study the relations of *wildfires* and the *wildland-urban interface* in the City of Corona (Acjachemen, Tongva, Payómkawichum homelands) and Mariposa County (Southern Sierra Miwok homelands). In some places, a distinct set of practices emerges—*fire as practices related to living, i.e., fire as ways of writing the world*. These are Indigenous fire practices that are continued by Indigenous fire practitioners dedicated to the growing movement of reasserting fire on their respective homelands. However, ongoing land occupation and changing land uses have diminished the presence of the once widespread Indigenous fire practices. Parts of California's built environments continue to be sites of resistance for many Indigenous people: in some places, stewardship and culture remain while in others, the loss and disruption are undone in various ways, such as but not exclusively, Indigenous movements of revitalizing cultural practices including fire, and those of land back. Although cultural burning practices and knowledges persist and are reasserted into the present, they are made in different relations and conditions of sovereignty.

In studying how (select) Indigenous fire practitioners are reviving cultural burning, I have come to understand ways in which reimagining worlds weaves into it as practices of liberation and Indigenous sovereignty. Here it is significant that fire's life-giving nuances lend to many possibilities for rethinking socio-spatial-environmental relations. Learning from Indigenous scholars and fire practitioners (North Fork Mono, Maidu, and more), I recognize that practices of imagining shift perspectives and offer ways to understand relations differently—i.e., relations of fire, place, and people. Practices of imagining and reimagining offer ways into renewed relations between Natives and settlers. Thus, reconfiguring how places

[3] USDA, Forest Service & USDI, Bureau of I***** Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service. "Urban wildland interface communities within the vicinity of federal lands that are at high risk from wildfire," Federal Register, 66(3), January 4, 2001, 753, https://www.federalregister.gov/documents/2001/01/04/01-52/urban-wildland-interface-communities-within-the-vicinity-of-federallands-that-are-at-high-risk-from.

are made, the land is used, how water moves through places and those who consume it, how fire caresses grass, or smoke whispers to the seeds. I understand this as an exercise in reimagining collective futures with *abolition geography*—which is rooted in *presence* and *world-making*. Abolition geography here is methodology and practice—from defining the research process and developing questions and analyses to imagining and making place otherwise. It is anti-colonial; hence, it dislodges parameters. This enables me to navigate the continuities and discontinuities of the architectural, urban, suburban, and National Forests, National Parks, and other places of extraction, while closely looking at the socio-environmental production of movement(s) and the manufactured lack of movement(s) across scales. The methodology is practiced in the construction of the dissertation project—that is, destabilizing structures from language to *wildfires* to create differently. The project imagines an architectural praxis centering life (and all its relevant complexities) by operationalizing the proposals of *living with fire* and *living as guests*.

Kurzfassung

Die Existenz und das Auftreten von Feuer unterscheiden sich je nach den Eigenschaften der Orte. In unterschiedlichen Biomen, die sich über Kontinente erstrecken, in Wäldern, Savannen, in Gras- und Buschland konstituiert Feuer verschieden Regime. In den besetzten Indigenen Gebieten mit dem Namen *Kalifornien* werden die lebensspendenden Funktionen des Feuers im Rahmen der Verantwortung übernehmenden Indigenen Praktiken als kulturelles Abbrennen hervorgehoben und definieren sich als „die [absichtliche] Nutzung des Feuers durch eine kulturelle Gruppe (z. B. Familieneinheit, Tribe,[1] Clan/funktionelle Gruppe, Gesellschaft) für eine Vielzahl von Zwecken und Ergebnissen."[2] Die vorliegende Arbeit begreift das kulturelle Abbrennen Indigener Feuerpraktiker*innen als eine Praxis der Souveränität und stellt es in den Mittelpunkt, um so den Entwurfsprozess zu überdenken - d. h. die Arbeit praktiziert ein Denken mit Feuer, um die Beziehungen zwischen Siedler*innen und denjenigen, deren Heimatland besiedelt wird, außerhalb kolonialer Modelle neu zu gestalten. Ausgehend von der Architektur und unter Einbeziehung von Geographie und Native Studies zeigt und entwickelt das Projekt Wege, wie wir uns eine kollektive Zukunft (collective futures) vorstellen können.

Kulturelles Abbrennen, ein Aspekt der Indigenen Verantwortung, prägte einst das Leben in der unmittelbaren und weiteren Umgebung. Dies ist jedoch unter der US-Regierung nicht mehr der Fall, wo die zerstörerischen Eigenschaften des Feuers im Vordergrund stehen. Das Projekt analysiert diesen Wandel vom *Leben mit dem Feuer* zur aktuellen *Bedrohung durch Waldbrände* (*threat of wildfires*). Dabei sieht sich das Projekt mit einer Reihe zeitlich verteilter siedlungskolonialer, kapitalistischer und Gefängnispraktiken (carceral practices) konfrontiert. Eingebettet in die so geschaffenen sozialen und räumlichen Umgebungen erkenne ich eine Gemeinsamkeit von Land, Wasser, Wiesen, Bäumen, Menschen

[1] Hierbei handelt es sich um eine Kategorie, die im westlichen Denken (auf Englisch) konstruiert wurde, um die formalisierte Präsenz Indigener Menschen zu beschreiben. Hier wurde sie nicht aus dem Englischen übersetzt.

[2] Jonathan W. Long, Frank K. Lake, and Ron W. Goode. "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA." *Forest Ecology and Management* 500 (2021): 2. https://doi.org/10.1016/j.foreco.2021. Übersetzt von der Autorin.

und mehr, die als Waren ausgewiesen werden—ihr Wert wird im Laufe der Zeit durch unterschiedliche Kräfte neu geformt und produziert: Ich analysiere, wie ausgewählte Orte in *Kalifornien*—gebaut, verlassen, abgerissen—durch eine koloniale, kapitalistische und Gefängnis-Logik zur Ware gemacht werden. Im Speziellen fokussiert diese Studie auf Beziehungen zwischen *Wildnis* (*wildlands)* und der *Schnittstelle zwischen Wildnis und Stadt* (*wildland-urban interface*). Diese Schnittstelle (die *wildland-urban* interface) ist ein abstrakter Ort, der dennoch als „Ort, an dem Menschen und ihre Bebauungen auf Wildnis-Brennstoffe (wildland fuel, Anm. der Autorin) treffen oder sich mit ihnen vermischen,"[3] beschrieben wird. Dieser ‚Ort' wird mit dem *Wüten von Waldbränden* (*wildfires*) in Verbindung gebracht, vor dem Hintergrund, wie Waldbrände Landschaften und Vorstellungswelten beleben und beflügeln. Die Ansätze zur Bewältigung der sogenannten Waldbrandkrise (*wildfire crisis*) an der *Schnittstelle zwischen Wildnis und Stadt* (*wildland-urban interface*) werden durch die Ambitionen der Kapitalakkumulation geprägt (und begrenzt). Der Reichtumszuwachs von wenigen geht auf Kosten von Menschen und Orten, insbesondere der sozial, wirtschaftlich und ökologisch am meisten gefährdeten. Ich argumentiere, dass die Lösungen und nachfolgenden Prozesse, die im Rahmen der Kapitalakkumulation vorgeschlagen werden, falsche Hoffnungen wecken und der Vorstellung von der Unmöglichkeit einer kollektiv sicheren Zukunft Vorschub leisten und diese aufrechterhalten.

Während ich die Frage stelle, warum Brände dort entstehen, wo sie entstehen, untersuche ich die Beziehungen zwischen Waldbränden (*wildfires*) und der Schnittstelle zwischen Wildnis und Stadt (*wildland-urban interface*) in der Stadt Corona (Acjachemen, Tongva, Payómkawichum-Land) und in Mariposa County (Southern Sierra Miwok-Land). An einigen Orten wird eine Reihe von Praktiken erkennbar —Feuer als lebensbezogene Praktiken, d. h. Feuer als Mittel zur (Be)schreibung der/von Welt. Es handelt sich dabei um Indigene Feuerpraktiken, welche von Indigenen Feuerpraktiker*innen weitergeführt werden, die sich der wachsenden Bewegung zur Wiederherstellung von Feuer als Teil ihres jeweiligen Heimatlandes (homelands) verschrieben haben. Die anhaltende Landbesetzung und die veränderte Landnutzung haben jedoch dazu geführt, dass die einst weit verbreiteten Indigenen Feuerpraktiken, die als kulturelles Abbrennen bezeichnet

[3] USDA, Forest Service & USDI, Bureau of I***** Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service. "Urban wildland interface communities within the vicinity of federal lands that are at high risk from wildfire," Federal Register, 66(3), January 4, 2001, 753, https://www.federalregister.gov/documents/2001/01/04/01-52/urban-wildland-interface-communities-within-the-vicinity-of-federallands-that-are-at-high-risk-from. Übersetzt von der Autorin.

werden, in Kalifornien immer weniger verbreitet sind.[4] Teile der bebauten Umwelt Kaliforniens sind für viele Indigene Menschen nach wie vor Schauplätze des Widerstands: an einigen Orten bleiben Verantwortung und Kultur erhalten, während an anderen der Verlust und die Zerstörung zu spüren sind, wie beispielsweise –aber nicht ausschließlich, bei Indigenen Bewegungen zur Wiederbelebung kultureller Praktiken, einschließlich des Feuers, und der Rückgabe von Land. Obwohl kulturelle Feuerpraktiken und -kenntnisse fortbestehen und in die Gegenwart zurückkehren, werden sie in unterschiedlichen Beziehungen und unter unterschiedlichen Souveränitätsbedingungen ausgeübt.

Durch die Untersuchung, wie (ausgewählte) Indigene Feuerpraktiker*innen das kulturelle Abbrennen wiederbeleben, zeigt sich mir auf, wie sich das Welten-Neu-Denken (reimagining worlds) mit dem kulturellen Abbrennen als Praktik der Befreiung und Praktik Indigener Souveränität verwebt. In diesem Zusammenhang ist wichtig hervorzuheben, dass die lebensspendenden Nuancen des Feuers viele Möglichkeiten bieten, sozialräumlich-ökologische Beziehungen neu zu denken. Indem ich von Indigenen Wissenschaftler*innen und Feuerpraktiker*innen (North Fork Mono, Maidu und anderen) lerne, erkenne ich, dass die Praktiken der Vorstellungskraft es ermöglichen, die Perspektive zu wechseln und Möglichkeiten bieten, Beziehungen anders zu verstehen –d. h. Beziehungen zwischen Feuer, Ort und Menschen. Praktiken des Vorstellens (*imagining*) und des Neu-Vorstellens (*reimagining*) bieten Wege zu erneuerten Beziehungen zwischen UreinwohnerInnen und SiedlerInnen. Somit wird die Art und Weise, wie Orte geschaffen werden, wie Land genutzt wird, wie sich Wasser durch Orte und diejenigen, die es verbrauchen, bewegt, wie Feuer das Gras streichelt und Rauch den Samen zuflüstert, neu konfiguriert. Ich verstehe dies als eine Übung zum Vorstellengen kollektiver Zukunft mit der *abolition geography*, die in der Präsenz und dem Welt-Machen (world-making) verwurzelt ist. *Abolition geography* ist hier Methodik und Praxis–von der Definition des Forschungsprozesses über die Entwicklung von Fragen und Analysen bis hin zu einem anderen Vorstellen und Gestalten des Ortes. Sie ist antikolonial, d.h. sie disloziert Parameter. Dies ermöglicht es mir, die Kontinuitäten und Diskontinuitäten des Architektonischen, Städtischen, Vorstädtischen, von Nationalen Wäldern (National Forests), Nationalparks und anderen Orten der Extraktion navigierend, während die sozio-ökologische Produktion von (sozialen) Bewegung(en) und des produzierten Mangels an Bewegung(en) genau zu betrachten. Die Methodik wird bei der Konstruktion des Dissertationsprojekts angewandt, d. h. bei der Destabilisierung von Strukturen, von der Sprache bis zu *Waldbränden*, um auf eine andere Weise zu gestalten. Das Projekt entwickelt die Vorstellung einer architektonischen Praxis,

[4] Jonathan W. Long, Frank K. Lake, and Ron W. Goode. "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA." *Forest Ecology and Management* 500 (2021): 2. https://doi.org/10.1016/j.foreco.2021.

die das Leben (und all seine relevanten Komplexitäten) in den Mittelpunkt stellt, indem sie die Vorschläge des Lebens mit dem Feuer und des Lebens als Gäste umsetzt.

With Fire:
Living as Guests
On Unceded
Indigenous Homelands
(In California)
And Architectural Praxes
For Collective Futures

Table of Contents

List of Illustrations

List of Abbreviations

BIA	Bureau of I***** Affairs
BLM	Bureau of Land Management
CalFIRE	California Department of Forestry and Fire Protection
DOD	Department of Defense
FRA	Federal Responsibility Area
HUD	Department of Housing and Urban Development
KotF	Keepers of the Flame
LRA	Local Responsibility Area
NPS	National Park Service
OSFM	The Office of the State Fire Marshall
SCAQMD	South Coast Air Quality Management District
SRA	State Responsibility Area
TEK	Traditional Ecological Knowledge
USDA	United States Department of Agriculture
USDI	United States Department of Interior
USFS/FS	United States Forest Service/ Forest Service
USFWS	United States Fish and Wildlife Service
WUI	wildland-urban interface

Preface

i. I had already immigrated to Austria when images of flames and smoke tracing areas of the Getty Center flooded my phone. It was yet another moment to contend with the reality that the exacerbated environment talks back, loudly. While the Getty is built to be *fire-proof*, the enclaves of the upper echelons of Los Angeles, if scathed by the fire would be put right back together. In any case, these were not my concerns in the moment. It was a pained feeling for a present dominated by capitalist allures sacrificing life, time and time again. How much longer? How much is enough? The distance made the frustration acute.

ii. One of the places I call home is part of the ancestral homelands of Tongva, Chumash, Fernandeño, and Tataviam People.[1] With the dissertation project, I set out to navigate ways of an architectural praxis as a *guest* on their respective homelands. The idea of a *guest* is well established by many Indigenous thinkers, scholars, practitioners.[2] In one expression, the Indigenous inhabitants of a place are *guests* taking responsibility for living in reciprocal relationships with the surrounding life—reproducing and maintaining life cycles. It differs from the Western concepts of leaving no human traces, flawed and unsound in their premise. Each Indigenous Nation has its own creation stories, practices, protocols for being in relations. Each has its own protocols for *their guests*, which is another expression. The concept of *guest* has breadth. One aspect describes and determines relations of Indigenous people and their homelands and living communities, ensuring life for future generations.[3] The other aspect of a *guest* opens relations with those arriving as *guests* on Indigenous homelands that they are in relation with as *guests* themselves.

It is safe to say that explorers, missionaries, colonizers, and settlers predominantly excluded the protocols of being *guests* from the onset. Instead, what began was

[1] I am a second-generation *Pakistani Indian American*.

[2] I understood it first through Charles Sepulveda's work "Our Sacred Waters: Theorizing *Kuuyam* as a Decolonial Possibility."

[3] Ron Goode, "A Community of Relations, A Relationship of Connectedness," Original 2018, Updated 2019.

the American genocide of Indigenous people. This genocide of Indigenous people in present-day California is substantiated by numerous Indigenous and non-Indigenous scholars and is being extended into education systems and acknowledged by the state. In 2019, in Sacramento, California Governor Gavin Newsom said during an apology on behalf of the state, "It's called a genocide. That's what it was. A genocide. [There's] no other way to describe it and that's the way it needs to be described in the history books."[4]

iii. There is a potential, there has always been, for settlers to come into relations as *guests* on Indigenous homelands. Charles Sepulveda, shares that "In the Tongva language the word for guests is *Kuuyam*."[5] "Settlers in California, and elsewhere, can be guests on the lands they live on. *Kuuyam* to the local Indigenous peoples, but more importantly, to the land itself… The status as *Kuuyam* is neither demanded nor ordered. It is instead a relationship offered and chosen. *Kuuyam* can disrupt settler colonialism."[6]

The idea of *guests* stretches, as reminded by Leanne Betasamosake Simpson:

"There is no justice in Land Back if it is not in concert with the destruction of racial capitalism, and if Black people remain landless."[7]

"There is no justice in Land Back if we are silent with regard to the radical imaginings of Black futures and Black struggles for freedom, just as there is no justice if Black liberation is framed through the ongoing dispossession of Indigenous peoples."[8]

She goes on to emphasize that her "vision to create Nishnaabeg futures and presences must structurally refuse and reject the structures, processes and practices that end Indigenous life, Black life and result in environmental desecration. This requires societies that function without policing, prisons, and property."[9]

---

[4] Taryn Luna, "Newsom apologizes for California's history of violence against Native Americans," *Los Angeles Times*, 18 June, 2019. Accessed 15 May, 2020. https://www.latimes.com/politics/la-pol-ca-gavin-newsom-apology-california-native-american-tribes-061818-story.htmlhttps://www.latimes.com/politics/la-pol-ca-gavin-newsom-apology-california-native-american-tribes-061818-story.html

[5] Charles Sepulveda, "Our Sacred Waters: Theorizing *Kuuyam* as a Decolonial Possibility," *Decolonization: Indigeneity, Education & Society,* Vol 7., No 1 (2018): 53. https://jps.library.utoronto.ca/index.php/des/article/download/30384/23037/71016

[6] Sepulveda, Our Sacred Waters," 54.

[7] Robyn Maynard and Leanne Betasamosake Simpson, *Rehearsals for Living* (Haymarket Books and Knopf Canada, 2022), 139-140, eBook.

[8] Maynard and Simpson, *Rehearsals For Living*, 139-140.

[9] Maynard and Simpson, *Rehearsals For Living*, 200.

Indigenous Nations are constantly establishing protocols for reconfiguring ways of being in places as *guests* and for *guests* to be in relation with them and their homelands. This invitation is commonly extended to settlers, to transform relations into that of *guests*. Navigating how to transform these relations is a dynamic process. It comes with specificities of place and people.

iv. Reflecting on the contradictions of the status quo, there is the challenge of vocabulary too. For instance, in academia many contemporary Indigenous scholars, especially the newer generation in US academia, reject the term *Indian* in reference to Indigenous people within the territory of the US. It is redacted or censored because it is a misidentification. It is a slur for some. It is not a term used to self-identify and understandably so. It is a colonial term. While it is not used to self-identify, many Indigenous scholars of different generations use the term when discussing the US occupation and as an extension, the manufactured category of the *Indian*. The relations determined by the colonizers/settlers are with the *Indians*. This is seen in the US government's naming of departments and in their documents, policies, laws, reports, literature, research, et cetera. While the previously established predominantly remain, there is a slight shift in many areas. Instead, terms such as *Indigenous* or *Native* are emerging. While *Native Americans* and *California Indians* are commonly used in the news media within California, in academia, literature, and more, these terms (*Native Americans, American Indians*, or *California Indians*) tend to be rejected as well because of the inherent contradictions. Understandably so, as they attempt to nullify the settler colonial relation by *Americanizing*.

v. On the cultural burning sites open to non-Indigenous people, I found a different use of vocabulary and terminology. The term *Indian* is most common. Perhaps, I think, it highlights the harmful settler colonial dismissal produced by the reification and persistence of the term by the settler state. As Peter Nelson writes in "Where Have All the Anthros Gone?" "positioned as an ethnographic refusal:" "The inaccuracies are the anthropologist's legacy."[10] People introduce themselves and Nation names in their respective languages. These are used often. They are preferred. *Indigenous* and *Native* are used here and there.

vi. While I have come to learn the nuances of the vocabulary used in English (spoken and written, within and beyond the university), to a

[10] Peter Nelson, "Where Have All the Anthros Gone? The Shift in California Indian Studies from Research "on" to Research "with, for, and by" Indigenous Peoples." *American Anthropologist 123*, no. 3 (2021): 469. https://doi.org/10.1111/aman.13633.

certain extent, it remains a challenge in my research. I chose (long before I began my research) not to use the term *Indian* for Indigenous people in what is called the US, or rather people not tied to the Indian subcontinent or West Indies. In the work, when the term *Indian* is used by government entities or non-Indigenous people, I censor it, i.e., I*****. When Indigenous people use it, I do not modify or censor it. At times, when non-Indigenous people use it, I will replace *Indian* with *Indigenous* or *Native*. I use *Indigenous* and *Native* interchangeably throughout the work.

vii. Nation, tribe, community and group. Not all Indigenous Nations (of *California*) are recognized at the federal level, but all are recognized by the state of *California*. Nation, as an Indigenous concept is very different from Western ideas of a nation-state. It does, however, produce a government-to-government relation. In the US, an Indigenous Nation may be noted as a *community* or commonly referred to as a *tribe*. Another Western misnomer and slighting perspective. I find it difficult to use the term *tribe* as it elicits a derogatory category produced by the West. I chose not to use the term *tribe* in my own writing; however, it appears when quoting an Indigenous scholar/practitioner. While community is a powerful idea and collective, in my understanding, when community is used by non-Indigenous to describe a structured Indigenous government, it has the tendency to abstract the governmental structure. As if unacknowledged. I remain cautious in using it. Although, conflicted. Similarly, with the term group.

viii. I chose not to share creation stories and details of Tongva or Nium belief systems and practices because I do not want to reproduce practices of extracting knowledge to produce knowledge. It is not mine to share. I take the responsibility of learning practices seriously and believe that when it comes to cultural burning, Indigenous fire practitioners determine how to share knowledge with designers or anyone else.

ix. The Euro-American-centric term and concept I reflect on in detail is *wild*. The analysis is spread throughout the work and as a foundation for non-Natives to shift perspectives on fire. I identify it as a vague and abstract colonial term that obscures understandings of a place and harms the reproduction of life in all its senses.[11]

[11] Ruth Wilson Gilmore described reflecting on *wild "as not asking the reader to choose a word but explaining contradictory processes, showing the making of abolition geography."* Personal Communication via Zoom June, 2024.

The use of the term *wild* in dominant Western science and environmental practices demonstrates the many layers of contradictions in colonial formations. *Wild* is the unknown. There is arrogance; instead of understanding a place and how the ecosystem functions, it is set aside as *wild*.

I reflect on the problematic of *wild* and the potential of shifting from *wild* in designing.

Stretching the idea of traditional design itself, rethinking design parameters is a generative practice growing in its reach in parallel to conservative design ideas. Undoing *wild* to undo the bounds of designing is where the project meets the flourishing movement of revitalizing Indigenous fire, which in turn, is practice in reimagining relationships in places and among people and places. Practice in living. Centering life and living.

x. I hope this study contributes to a critical reflection on one's surroundings in what is now called California, guided by the respective Indigenous leadership and protocols. Perhaps the study adds to ways to challenge designing in education and professions beyond the epitome that is California. To challenge property laws, capitalism's degradation, policing and other harms in different places where people have their own emerging movements centering living and practices in living.

…it is an ecology imperiled by its own desirability: on the one hand, by overdevelopment and 'hill cropping'; on the other, by manmade disasters like slides and fires.

—Mike Davis, 2006.

(Reflecting on
Reyner Banham's Los Angeles: The Architecture of Four Ecologies)

Ready To Burn

The people would wait for fire season to start, the time when they could put their first burns. The first ecosystem ready to burn on Awu-Laya country is the boxwood tree system. Poppy would point out signs of flowering trees that signaled the start of certain systems. He pointed out the bloodwood trees' first flower of the year, which told him when the boxwood country was ready to burn.

—Victor Steffensen, 2020
Fire Country: How Indigenous Fire Management Could Help Save Australia[1]

Fire transformed places before human presence on earth, and humans altered systems and societies with fire—"societies and cultures have evolved to use fire."[2] *Of course, the presence of fire in any given place varies. Fire sets up various regimes in different biomes spanning continents and across forests, savannahs, grasslands, and shrublands.*[3] *In many ecosystems they are an essential component as a primary source of plant biomass and enhance plant and soil nutrients.*[4] *In Mediterranean ecosystems, fire plays a crucial role in defining the composition of flora and fauna while affecting "biodiversity on both ecological and evolutionary time scales."*[5] *Given the life-sustaining capacities of fire, humans adapted the natural phenomenon over time as a pivotal technology for living. Across geographies, Indigenous, Native, and Aboriginal people perform(ed) fire practices integral to their respective stewardship. With fire, they could favor certain landscapes and vegetation, create paths, and support healthy ecosystems while generating*

---

[1] Victor Steffensen, *Fire Country: How Indigenous Fire Management Could Help Save Australia (*Hardie Grant Publishing, 2020), 33.

[2] Frank K. Lake, "Historical and Cultural Fires, Tribal Management and Research Issue in Northern California: Trails, Fires and Tribulations." *Occasion: Interdisciplinary Studies in the Humanities*, Volume 5 (March 1, 2013): 1, https://shc.stanford.edu/arcade/publications/occasion/comparative-wests/historical-and-cultural-fires-tribal-management-and.

Frank Kanawha Lake, *USDA Forest Service, Pacific Southwest Research Station, United States*.

[3] Cristina Vidal-Riveros, Pablo Souza-Alonso, Sandra Bravo, Rafaela Laino, Marie Ange Ngo Bieng, "A review of wildfires effects across the Gran Chaco region." *Forest Ecology and Management*, Volume 549 (2023): 1. https://doi.org/10.1016/j.foreco.2023.121432.

[4] Harold A. Mooney and Erika Zavaleta, eds, *Ecosystems of California* (University of California Press, 2016), 27.

[5] Mooney and Zavaleta, *Ecosystems of California*, 27.

biochar, capturing carbon, and rejuvenating soil as smoke germinated the seeds.[6] *Referred to as cultural burning in the US, it is intentionally used "by a cultural group (e.g., family unit, Tribe, clan/moiety, society) for a variety of purposes and outcomes."*[7] *For instance, cultural burning helps*

> *(1) modify fire regimes, adapting and responding to climate and local environmental conditions to promote desired landscapes, habitats, species, and (2) to increase the abundance of favored resources to sustain knowledge systems, ceremonial, and subsistence practices, economies, and livelihoods. [Cultural burning] is the intergenerational teachings of fire-related knowledge, beliefs, and practices among fire-dependent cultures regarding fire regimes, fire effects, and the role of cultural burning in fire-prone ecosystems and habitats.*[8]

While this description comes from Frank Kanawha Lake working in areas of the Pacific West and Amy Cardinal Christianson in North Western Canada,[9] *elsewhere too, cultural burning (termed differently) is in practice or being reintroduced—for several reasons in distinct ecosystems with differentiable fire intervals. Traditional firekeepers maintain and pass down knowledges of fire related to their respective geography and culture. Traditional roles often adapt due to disruptions via colonial occupation and imperial dispossession. As do the processes and organizations of the Indigenous communities and Nations to reassert cultural burning practices—usually negotiating with settler and oppressive governments and institutions. These processes and outcomes tend to differ from place to place. Many Indigenous fire practitioners continue setting up and expanding networks (such as the Indigenous Stewardship Network initiated in California) beyond national borders to exchange*

---

[6] Chris Paulus and Frances Ragle, "Indigenous Management Practices (IMP) with the applied use of Traditional Ecological Knowledge (TEK)," virtual lecture, April 6, 2021, posted April 7, 2021, by Return California (Return California's 1st Tuesday of April Listening Roundtable), YouTube, 1:33:02, https://youtu.be/wfQkipCGDu0?si=rWNR1ocU4VtL3oGu.

[7] Jonathan W. Long, Frank K. Lake, and Ron W. Goode. "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA." *Forest Ecology and Management* 500 (2021): 2. https://doi.org/10.1016/j.foreco.2021. Quoting: William Nikolakis, Emma Roberts, Ngaio Hotte, and Russell Myers Ross, "Goal setting and Indigenous fire management: a holistic perspective." *International Journal of Wildland Fire 29* (2020): 974-982, https://doi.org/10.1071/WF20007

[8] Frank Kanawha Lake and Amy Cardinal Christianson, "Indigenous Fire Stewardship" In *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*, edited by Samuel L. Manzello (Springer, 2020): 714, https://doi.org/10.1007/978-3-319-52090-2_225

[9] The Treaty 8 Tribal Association. http://treaty8.bc.ca/treaty-8-accord/

and amass knowledge, resources, and strategies for navigating contemporary habitats and red tape processes. Although fire-prone areas and cultural burning have vast international contexts, the project focuses on regions of California in the US. However, references to different regional practices, contexts, and networks appear in the work.

Introduction.
With Fire.

The policy of fire suppression in Western society arises from the myth that nature can be controlled.

—Robin Wall Kimmerer and Frank Kanawha Lake, 2001
The Role of Indigenous Burning in Land Management

Indigenous socio-cultural production and reproduction persist in cultural burning practices despite the disruptive colonial reorganization of land. In California, where the research is focused, fire and cultural burning have long been a part of living on these lands, producing and shaping Indigenous worlds for millennia. Indigenous people developed vast and intimate knowledges of their homelands, which are reflected and implemented in their daily world-making practices. Understanding fire as an innate element of the terrain and with generations of knowledge of the fire cycles in these ecosystems, Native people use fire in ceremonies and to cultivate the land, increase biodiversity, preserve knowledge, and much more. These were prevalent before the discontinuous unmakings into California. Ecologically, fire is "a disturbance," and California is predisposed to such disturbance—a predisposition defined by topography and weather and, in the south, by the Santa Ana winds.[1] Fire-prone ecosystems with regional fire regimes, such as those in California, are scattered throughout the globe.[2] As is the case in other fire-prone ecosystems, in California too, Indigenous people have adapted them for burning to form desired and specific cultural fire regimes– "as coupled socio-ecological systems."[3]

Contrary to colonizers and settlers' assumptions that the landscapes they saw before them were untouched—that is, *wild*—Native practices that produced these systems were learned and refined over time to reach the desired results. This knowledge carries from one generation to the next. As with learning processes, sometimes outcomes were unsuccessful, causing land degradation or extinction of

[1] Mooney and Zavaleta, *Ecosystems of California*, 21,27.
[2] Mooney and Zavaleta, 9.
[3] Lake and Christianson, "Indigenous Fire Stewardship," 714.

plants and animals.[4] However, this is not one of the defining characteristics or the legacy of cultural burning. Through my research on cultural burning, I have understood that insights into *learning to live with fire* dynamically shape places and patterns of movement. Cultural burning "had the highest influence around settlements...and travel corridors" which were connected to stewarded food and material resources.[5] Since 1973, scholars have cataloged 70 objectives of cultural burning, placing them in 11 to 18 categories (between 2005 and 2015, some of the listed objectives are medicinal, subsistence, spiritual, religious, cultural, shaping space, healthy life cycles/systems, water flow, soil nutrients).[6] Of course, many of these are interconnected. It is essential to point out, as have studies and reviews on chaparral ecosystems in California, that Indigenous fire practices aim at particular organisms and "support social engagement and ecosystem-level functions."[7]

Before the Spanish, Mexican, and US occupations, Indigenous homelands within California were uninterruptedly adapted and maintained by their respective Indigenous stewards with cultural burning practices. Though different generations have confronted changes in climatic cycles, such as extended periods of drought. Nonetheless, forests were kept sparse, with openings between canopies to let in light for healthy ecosystems, water, and lands.[8] Grasslands were a notable feature. Varying Indigenous fire practices formed the preferred microecology, biodiversity, and a mosaic of vegetation. During different periods of colonization and settlement (Spanish, Mexican, and US), many light-filled forests were gutted for intensive resource production and then regrown into thick forests. Heavy reliance on timber and lumber for construction created a frenzy to ensure steady supplies of wood (although Mexican officials were concerned and limited the intensity of logging to reduce the depletion of resources). Today, other than state, county, and private ownership, the United States Department of Agriculture's (USDA) Forest Service (USFS/FS) is one of the four major federal agencies that manage lands and resources.[9] It uses the land to generate revenue, historically and in the

[4] M. Kat Anderson, *Tending the Wild: Native American Knowledge and Management of California's Natural Resources* (University of California Press, 2005), 6.

[5] Lake and Christianson, "Indigenous Fire Stewardship," 714.

[6] Long et al., "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 3.

[7] Long et al., 3.

[8] Ron Goode, personal communication via Zoom, 2021.

[9] Department of Agriculture—Forest Service; Department of the Interior—Bureau of Land Management (BLM), Fish and Wildlife Service (FWS), and National Park Service (NPS); Bureau of I***** Affairs (BIA); the National Oceanic and Atmospheric Administration (NOAA); U.S. Army Corps of Engineers (the Corps). "Managing Federal Lands and Waters," U.S. Government Accountability Office. https://www.gao.gov/managing-federal-lands-and-waters#:~:text=Four%20major%20federal%20land%20management,about%2095%25%20of%20these%20lands. https://www.gao.gov/key_issues/managing_federal_land_waters/issue_summary.

present, through timber sales.[10] Many logging roads used in the past are still used as access roads for recreational purposes in the forests.[11] In several places across California, changes in land use, such as the introduction of logging and reduced stewardship practices, such as cultural burning, have evolved these ecosystems—and the types of trees, grasses, and shrubs that exist transform the fire regimes. Besides being valued as a resource by the colonizers, wood was also part of the aesthetic production of lushness—a dense forest marked the creation of bountiful nature for Man to consume. Currently, most forests managed by the US Forest Service in Southern California are for recreational purposes.[12] They are consumed as a fetishized aesthetic, a coveted commodity—Nature, a National Park, a National Forest. This requires continuing dispossession, which is a reminder of the many ways "US sovereignty rests on anti-indigenous concepts of race and place."[13]

The appropriation of Indigenous land (and water) by removing Indigenous people from their homelands based on contrived fallacies of 'unused land' is known. As is the skewed idea of a scarce Native population with miniscule capabilities of transforming their surroundings due to "unadvanced" technologies.[14] In journal entries and letters, missionaries, explorers, and trappers often describe or reference Indigenous stewardship practices such as cultural burning, but these are primarily strewn with negative opinions.[15] The complex ecological processes mediated by purposeful cultural burning practices, instrumental "in shaping the [pre-colonized] landscape," were seen by colonizers and settlers predominantly as "destructive and hazardous."[16] Frank Lake signifies the importance of cultural

---

[10] Richard W. Haynes, *An Analysis of the Timber Situation in the United States: 1952 to 2050*, General Technical Report PNW-GTR-560. Portland (U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, 2003), 4.

Additionally: William F. Laudenslayer, Herman H. Darr, "Historical effects of logging on forests of the Cascade and Sierra Nevada ranges of California," *Transactions of the Western Section of the Wildlife Society* (Pacific Southwest Research Station, 1990). https://www.fs.usda.gov/research/treesearch/20500

[11] Laurie Litman and Gary Nakamura, "Forest History," *Forest Stewardship Series 4*, Publication 8234 (2007), 4. https://anrcatalog.ucanr.edu/pdf/8234.pdf , https://doi.org/10.3733/ucanr.8234

University of California Division of Agriculture and Natural Resources

[12] 18 National Forests in California generated a total of $10.6 MILLION in annual recreation fee revenue as noted in a 2023 USDA publication: "Nature's Benefits: Recreation," 8 September 2023, US Forest Service, US Department of Agriculture. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd624828.pdf

[13] Meredith Alberta Palmer, "Rendering settler sovereign landscapes: Race and property in the Empire State," *Environment and Planning D: Society and Space*, 38(5) (2020): 1, https://doi.org/10.1177/0263775820922233

[14] Anderson, *Tending the Wild*, 6.

[15] Anderson, 6.

[16] Robin Wall Kimmerer and Frank Kanawha Lake, "Maintaining the Mosaic: The Role of Indigenous Burning in Land Management." *Journal of Forestry*, Volume 99, no. 11 (2001): 37.

burning, explaining that Indigenous people relied on "fire-modified habitats" and moved from one place to another, one resource to another with the "trail systems" they gradually developed.[17] Lake cited a historical account from a Karuk man on the use of trails: The Karuk man tells of what was "'originally…open grassland, … maintained by Indian burning. Over hundreds and thousands of years the burning had created open grasslands for deer and elk forage. …Now it has grown over with oaks, madrone, and conifers." [18] Lake tells the reader more about trails and how they "linked people to place: "

> The trail systems established by California tribal groups networked individuals and families with desired resources, from coastal to alpine environments across a variety of habitats with differing fire regimes and plant communities. Most trails followed the edge of water courses and ridges, with some minor deviations connecting resource use areas of various habitats. Some of these trail systems have been in use for millennia. …Using trails was the most efficient way to traverse the landscape, and during Euro-American exploration and colonization, these trails were used by nontribal people—first trappers and explorers, then in significant numbers gold miners and settlers—to explore, exploit, and settle tribal territories.[19]

Robin Wall Kimmerer and Frank Kanawha Lake note that Native fire practices are made undesirable.[20] Colonizers did not ban Indigenous fire practices at once, nor were they stopped entirely, but fire became criminalized differently over the past couple of centuries. However, processes of removing fire from the lands did take place—and for the most part, institutionalized fire exclusion and suppression continued well into the twentieth century (as well as in the present). One reason for enforcing fire suppression practices in forested regions under federal governance of lands in the 1900s was the high value of wood for logging.[21] Other reasons include grazing, agricultural production, industrialization, settlement, growing housing developments, recreational use, and preservation and conservation practices, to name a few.

Fire removal was not limited to the lands, plants, or grasses. Fire removal took place in the realm of knowledge production as well, that is, in Western knowledge productions. Kimmerer and Lake argue that Indigenous knowledge is suppressed because of "ignorance and prejudice," along with what is considered as

---

[17] Lake, "Fires and Tribulations," 1.

[18] Quoted in Lake, "Historical and Cultural Fires," 20 from US Forest Service, Six Rivers National Forest, Heritage Program: interview 209, April 6, 1978.

[19] Lake, "Fires and Tribulations," 20.

[20] Kimmerer and Lake, "Maintaining the Mosaic," 36.

[21] Anderson, *Tending the Wild*, 119.

"fragmentary nature of the evidence."[22] They point to the intrinsic limitation of accepted methods and evidentiary material in Western science.[23] "Accounts of aboriginal burning are found in notes, journals, and the oral tradition. These are qualitative, anecdotal sources that are not readily accepted by Western scientists whose training is usually limited to interpretation of quantitative data."[24] As Indigenous fire scholars and practitioners have carved more and more space for inserting Indigenous stewardship practices into the private, county, state, and national agencies and institutional conversations, at times, these propelled enduring actions. However, many systemic challenges are still intact. Lake and Christianson shed light on the problem with power distribution as he explains that other than a select number of places under Indigenous governance, the vast number of countries worldwide manage fire through the state.[25] The state entities typically use centralized structures formed by colonial/imperial processes and control decisions relating to far-off, local fire practices.[26]

In California, while many have continued to put fire on their respective homelands (in some regions of Southern California but mainly in Northern and Central California), it is one of the places where the calamitous traits of fire come to the forefront. While fire has both life-giving and destructive capacities, the notion of the latter has prevailed since the eighteenth century. Of course, with nuances. The widespread public opinion about fires is that they are solely disastrous to land, air quality, and, in general, society. This view has created obstacles in many ways, spaces, and temporalities. Ravaging fires continue capturing imaginations for the worse as apocalyptical imaginaries dominate. Cindi Katz's words reverberate today—" [a]pocalypticism [continues to be] fashionable…in North American and European constructions of nature and society."[27] However, "nature made apocalyptic gives rise to a politics of hopelessness from which the means of social and environmental transformation are unlikely to emerge" because being made "apocalyptical *obscures* [the] political, economic, and social dimensions."[28] Nonetheless, finding ways to undo oppressive colonial practices, Natives continue to keep cultural burning alive not only with the hope of shifting perceptions, opinions, and attitudes but also as practicing liberation.

---

[22] Kimmerer and Lake, "Maintaining the Mosaic," 38.

[23] Kimmerer and Lake, 38.

[24] Kimmerer and Lake, 38.

[25] Lake and Christianson, "Indigenous Fire Stewardship," 716.

[26] Lake and Christianson, , 716.

[27] Cindi Katz, "Under the Falling Sky: Apocalyptic Environmentalism and the Production of Nature," In *Marxism in the Postmodern Age: Confronting the New World Order*, edited by A. Callari, C. Biewener, and S. Cullenberg (The Guilford Press, 1994): 276.

[28] Katz, "Under the Falling Sky," 279 (paraphrasing Margaret FitzSimmons), 278.

Indigenous fire practitioners use several ways to reassert cultural burning on their homelands. Some have found ways to take control of the cultural burning processes on their homelands by becoming the burn boss and leading a team on their own terms. Until the executive bills were passed in 2021, one of which articulates the category of a cultural practitioner, this was a tedious process.[29] The practice is also limited by the sole liability resting on the Native fire practitioners—and insurance is pricey! Now the second bill releases Native fire practitioners from liability when the criteria are met. Native fire practitioners work with agencies in various capacities. These are negotiated differently in each instance. However, in the face of fire occurrences drastically overwhelming agency resources in California, state and local agencies are more interested in making alliances with Indigenous fire practitioners. This brings attention to several challenges since decision-making usually rests in the hands of agencies. The agencies often base their goals on fire mitigation, and the "burns tend to be more focused on reducing fuels and avoiding canopy mortality, while relying more on climatological metrics, constructed fire lines, and suppression technology."[30] Unlike agency-led burns, cultural burns are characterized as and "preceded by extensive site preparation and followed by monitoring and additional cultural practices as part of a land stewardship tradition."[31]

Fire as Movement: The Research Project

The project began with a curiosity about what stands behind the *wildfires* in California. The early research closely looked at some areas where *wildfires* occurred to understand *why they happen where they happen.*[32] To understand what produces *wildfires* in some areas and not others. As I began piecing together an analysis from the research, I noticed an emphasis on protecting private property and homes from *wildfires*. This echoes the Smokey Bear campaign, which is now recruiting private individuals to prevent fire near their homes and protect

[29] Senate Bill No. 332, Chapter 600, Statutes of 2021, 2021 Reg. Sess. (California, 2021) https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB332
Assembly Bill No. 642, Chapter 375, Statutes of 2021, 2021 Reg. Sess. (California, 2021) https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB642

[30] Long et al., "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 3.

[31] Long et al., 3.

[32] Ruth Wilson Gilmore, The Faculty of Architecture and Spatial Planning biannual Colloquium for Doctoral Students (Zoom Review), Vienna University of Technology, TU Wien, 27 May, 2021.

the homes from catching fire.[33] From this perspective, homes at risk of *wildfires* are where the *crisis* appears—in the Wildland-Urban Interface (WUI). It is a harsh reminder that "[u]nder capitalism, social crises still focus on the production process but now lie at the heart of a complex social system."[34] The WUI is an abstract place, nonetheless, described as the merging of development and the *wildland*.[35] The annual safety and fire mitigation guidelines produced by the state and county institutions substantially focus on what individual private homeowners can do to safeguard their private property in the WUI—and one strategy is "home hardening."

In 2019, the governor of California signed a bill to form the California Wildfire Mitigation Home-hardening Program to relieve some pressure from out-of-pocket costs and give more houses a fighting chance. The program targets "high socially-vulnerable communities...providing financial assistance for low- and moderate-income households."[36] It is being rolled out piecemeal, and a few counties are starting pilot programs. Coordinated by the California Governor's Office of Emergency Services (Cal OES) and California Department of Forestry and Fire Protection (CAL FIRE), the program "encourages cost-effective wildfire resilience measures" "for homes at high risk to wildfires."[37] However, the Home Hardening Program does not ameliorate the disproportionate impacts of *wildfires* based on income, race, and gender. It is not because the program's rollout to many counties has yet to be seen, but because the strategy does not address the complex web producing and reproducing the crisis that spans beyond the WUI in the depths of the organization of systems.[38]

---

[33] The Smokey Bear campaign began in 1994 under the US Forest Service. Robert Hudson Westover, "Coming up in 2024: Smokey Bear turns 80" USDA Forest Service, December 14, 2023, https://www.fs.usda.gov/about-agency/features/coming-2024-smokey-bear-turns-80

Additionally: https://smokeybear.com/

[34] Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space*, Third edition (University of Georgia Press, 2008): 84.

[35] USDA, Forest Service & USDI, Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service. "Urban wildland interface communities within the vicinity of federal lands that are at high risk from wildfire," Federal Register, 66(3), January 4, 2001, 753, https://www.federalregister.gov/documents/2001/01/04/01-52/urban-wildland-interface-communities-within-the-vicinity-of-federallands-that-are-at-high-risk-from

[36] "California Wildfire Mitigation Program," California Governor's Office of Emergency Services (Cal OES), https://www.caloes.ca.gov/office-of-the-director/operations/recovery-directorate/hazard-mitigation/california-wildfire-mitigation-program/

[37] "California Wildfire Mitigation Program (CWMP) Home Hardening Retrofit Financial Assistance," California Department of Forestry and Fire Protection (CAL FIRE)," https://osfm.fire.ca.gov/committees/california-wildfire-mitigation-program

[38] Correspondingly, another ongoing crisis in California is the affordable housing crisis. This crisis appears in the concentration of unhoused people occupying neighborhood streets and parks with encampments. These crises do not impact everyone in the same ways. The affordable

My project does not intend to provide an analysis of "home hardening" solutions. Instead, by asking *what makes homes at high risk of wildfires,* the project tries to understand the "social crisis" which underlies the conditions producing California's WUI's and the *crisis* in California's WUI(s). The question persisted throughout the project, across scales and giving space to complexity and contradictions. In geography, scale is seen as "an active progenitor of specific social processes."[39] Building on N. Smith's work on scale, Ruth Wilson Gilmore writes that "scale suggests the actual and imaginative boundaries in which political geographies are made and undone."[40] This way of thinking scale helps me to consider "the *range of kinds of places*—as intimate as the body and as abstract, yet distinctive, as a productive region or a nation-state."[41]

Dismantling the WUI and the *crisis* in the WUI, driven by real estate development and built on the antithetical ideas of Nature—i.e., Nature controlled by Man, Nature for Man to consume—pries open the current socio-environment as a condition *in process.* The environment in process, where the past lives in a range of opacities—incomplete and unfixed, and "nature is produced materially and metaphorically, in historically and geographically specific ways."[42] It is helpful to recall here that the idea of nature "as something external to society (rather than produced) is itself a thoroughly social construction."[43] In her analysis, Katz reflects on Neil Smith and insists that "[a]ny contemporary politics of nature must therefore be rooted in the specifics of capitalism and society."[44]

The project uses scale to locate the ruptures in "capitalist-colonial logics," which form and transform specific environments of California.[45] In ruptures are movements centering relationships between live-giving fire practices and place—

---

housing and wildfire crises produce uneven impacts based on class, race, and gender. The most vulnerable are impacted by the affordable housing crisis which is produced in several ways by the competitive real estate market, staggering income, high evictions, and lack of public health care, to name a few.

[39] Neil Smith, "Contours of a spatialized politics: Homeless vehicles and the production of geographical scale," *Social Text 33* (1992): 66.

[40] Ruth Wilson Gilmore, Brenna Bhandar, and Alberto Toscano, *Abolition Geography: Essays Towards Liberation* (Verso, 2022), 101, referencing Neil Smith, "Contours of a spatialized politics: Homeless vehicles and the production of geographical scale," *Social Text 33* (1992), pp 55-81.

[41] Gilmore, Bhandar, and Toscano, *Abolition Geography*, 133.

[42] Cindi Katz, "Under the Falling Sky," 279 refencing Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space*, Second edition (Basil Blackwell, 1990).

[43] Cindi Katz, "Under the Falling Sky," 279 refencing Neil Smith, *Uneven Development*.

[44] Katz, 279 refencing Neil Smith, *Uneven Development*.

[45] "Ten Point Program," in "The Red Nation Pamphlet Manifesto," The Red Nation, https://therednationdotorg.wordpress.com/manifesto/10-point-program/

particularly, Indigenous fire practices transforming relations of place. The work is committed to understanding the life-forming processes of cultural burning toward liberation, that align with principles of land back and Native sovereignty (and disavowing technocratic solutionism). It is critical to remember that prior to colonial and settler fire suppression and exclusion practices, the use of fire once produced the desired Indigenous homelands. By expanding and reintroducing fire, it is possible to alter fire regimes once again. This is already underway in places where "good fire" is applied.[46] Given these reconfiguration processes, I ask *how more of the current landscapes can be transformed so that the most vulnerable in society can live safely with fire*. I navigate this question with the work of abolition geography, focusing on multiple enduring collective world-making practices embedded in everyday life (yet thinking across borders and temporalities). Other vital questions informing the process ask *how fire has existed on these lands; how fire transforms relations; what living with fire could look like; how the use of fire influences movement, designing space, making society, and producing culture; why relationships between fire and design must emerge in centering liberation, life, living, land back, and Indigenous sovereignty*. With these parameters, the project focuses on the ongoing life-giving practices of cultural burning, discarded from or buried in Western knowledge productions, and emerging "to redescribe this world" with fire.[47] I look to approaches that center living in different scales and spaces and by many people across California (including Ron Goode and Irene A. Vasquez). These give insight into ways people organize land and things otherwise. I look to collective processes and places cultivated in response to living with fire today. I am interested in the moment in which there is an acceptance of learning to live with fire—explicitly becoming familiar with and embracing practices of cultural burning as Native sovereignty and Land Back. It invites those living on these lands to rethink private property, resource distribution, and articulation of differences in various ways. Practices such as "*Kuuy nahwá'a*...a Tongva people's concept that means guest exchange. [It is] a voluntary recurring contribution individuals and institutions can make to support Tongva-led Land Back efforts acknowledging both relationships and reciprocity to the lands and Native Peoples of Tovaangar."[48]

---

[46] A term used by Native fire practitioners to describe healthy fire, light fire with light smoke, cultural burning. Sara A. Clark, Andrew Miller, And Don L. Hankins for the Karuk Tribe, "Good Fire I: Current Barriers to the Expansion of Cultural Burning and Prescribed Fire in California and Recommended Solutions," 2021, https://karuktribeclimatechangeprojects.wordpress.com/good-fire/

[47] Kenton Card, *Geographies of Racial Capitalism with Ruth Wilson Gilmore* (An Antipode Foundation film directed by Kenton Card, in association with BFD Productions, 2019). Film. https://antipodeonline.org/geographies-of-racial-capitalism/

[48] "What is Kuuy nahwá'a?" The Tongva Taraxat Paxaavxa Conservancy, https://www.tongva.land/

Thinking with cultural burning for living as guests on Indigenous homelands is a central proposal to reformulate principles of designing as life-enriching socio-spatial makings and remaking with movements of life cycles. Following liberation practices. Valuing life. The research with fire is related to the intricacies of movements made invisible or prevalent via colonial, capitalist, and carceral logics. While much is discussed about these relations in the following pages, the project does not intend or claim to produce a complete account or a closed study. It is not a historic retelling but rather a "constructed...narrative through" fire.[49]

With the research, I hope to identify and expose practices of designing with fire and begin to form approaches that support praxes of living and for life to flourish.[50] I follow the creative, life-giving capacities of fire. I look to the Keepers of the Flame and Ron Goode (Chairperson of the North Fork Mono), who introduced me to a growing network of fire practitioners and the many fronts of ongoing work. The people whose organizing I learned about and from during the research are what I have come to understand as practices of living with fire. I attempt to use the research project as a way to rethink designing practices with cultural burning and set up how to become part of these processes of making space differently. Thinking with fire practices is then embedded in the methodology and assembled as a methodology—that is, as an approach to researching and assembling the gathered knowledge and insights. Initiating my research in architecture, I ventured into geography and Native studies. With this expansion across fields, I identified a concept to study how fire and cultural burning practices continue making place. The concept I identify as a basis for methodology is this—"if justice is embodied, it is then therefore always spatial, which is to say, part of the process of making space."[51] Beginning with this, geography—as in abolition geography—is noted as the framework the project builds with (and what keeps me in check). Abolition geography is a way of presence and world-making. Understanding designing as tending to relations for living and cultural burning as a way of designing worlds and places. Life-enriching socio-spatial makings and remaking with movements of life cycles.

---

[49] Mahasen Nasser-Eldin, "How Do I Construct Historical Narratives through Image and Sound?" Interview by Arda Aghazarian, November 16, 2021, Jerusalem Story, https://www.jerusalemstory.com/en/blog/mahasen-nasser-eldin-how-do-i-construct-historical-narratives-through-image-and-sound

[50] Katherine McKittrick, *Dear Science and Other Stories* (Duke University Press, 2021), 3.

Ruth Wilson Gilmore, "Where life is precious, life is precious," The On Being Project with Krista Tippett, https://onbeing.org/programs/ruth-wilson-gilmore-where-life-is-precious-life-is-precious/

[51] Gilmore, Bhandar, and Toscano, *Abolition Geography,* 137.

Abolition Geography: (Researching) Fire on Native Homelands. Decolonizing, (Re)mapping, Racial Regimes of Ownership

Linda Tuhiwai Smith's *Decolonizing Methodologies: Research and Indigenous Peoples* reminds us that research design is a decision-making process and teaches us that these decisions do not have to and must not be based on colonial practices. That is, they need not be extractive or exploitative. Understanding that research has roots in imperialism and the ability to serve its knowledge regimes, Smith rethinks the work of research. Smith discusses the role of research embedded in imperialism, and thus against Indigenous peoples and First Nations, and considers possibilities for research outside of it that can be beneficial rather than harmful. Mainly writing in the context of research with and by Indigenous people (Māori), Smith sets out parameters for designing research methodologies that emphasize a shift in context and goals. That is, no longer seeing the Native communities as subjects (as the Other) and instead explicitly rethinking the work of research—who is producing it? For whom is it useful? How is it useful? Who does it benefit? Who has access? Consequently, the research processes must be reorganized. To recognize and understand different knowledge systems. To develop relations with Native collaborators as partners in research. To request consent. To become familiar with learning protocols and establish sets of protocols together with Native collaborators. To determine research goals and ways of conducting, using, and accessing research.

Smith does not provide a handbook of methodologies. Instead, she shares ways of building rigorous, respectful, useful, and generous approaches to research in relation to the communities one engages. Most importantly, "*Decolonizing Methodologies* locate[s] responsibility to change society both in the non-indigenous and indigenous worlds."[52] Smith's work reflects on the potential transformation of society by confronting the Other in research as a way "to renew by unsettling…."[53] She shifts the centralized role of research from the imperial imaginary to becoming helpful in erasing the designation of the Other in research. In these ways, research(ing) becomes a process negotiable, permeable, and fluid in what it stands to do—shifting the role of the researcher and, in this project, rethinking the role of designing on Indigenous homelands. Living otherwise. Not simply overcoming the limitations and categorizations of imperial systems but also thriving. I am reminded of the "method-making" proposed, or rather, storied, in

[52] Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples. 2nd Edition*. (Zed, 2012), xii.

[53] Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning and Black Studies* (Minor Compositions, 2013), 20.

Dear Science and Other Stories. Writing about black method that focuses on livingness and liberation practices, Katherine McKittrick discusses how this means working "against description."

> This is a way of living, and an analytical frame, that is curious and sustained by wonder (the desire to know). This is a method that demands openness and is unsatisfied with questions that result in descriptive-data-induced answers. Black studies and anticolonial thought offer methodological practices wherein we read, live, hear, groove, create, and write across a range of temporalities, places, texts, and ideas that build on existing liberatory practices and pursue ways of living that world that are uncomfortably generous and provisional and practical and, as well, imprecise and unrealized. The method is rigorous, too. Wonder is study. Curiosity is attentive. Black method is therefore not continuously and absolutely undisciplined (invariably without precision, invariably undone). Black method is precise, detailed, coded, long, and forever. The practice of bringing together multiple texts, stories, songs, and places, involves the difficult work of thinking and learning across many sites, and thus coming to know, generously, varying and shifting worlds and ideas.[54]

McKittrick's analyses and imagination offer an abundance of culture as presence and the directive for cultivating more presence. Navigating with *Dear* Science demands "studying ways of knowing" rather than "studying science." Along with Smith's *Decolonial Methodologies*, I have analytical structures to overcome the disciplining boundaries of the colonial, capitalist, and carceral.[55] The presence of "how we know what we know" embedded in the project helps to evade reinscribing the violence of othering or dehumanizing, or sidelining knowledge systems such as Traditional Ecological Knowledge (TEK).[56] In this project, I attempt to put methodology into practice. For instance, transgressing imperial disciplinary parameters by thinking with TEK, which is an Indigenous knowledge system. [57] Through operationalizing language and its writing structure for imagining– reconfiguring thinking by rearranging writing; reorganizing writing by reconstructing thinking. Growing scientific research methods by removing

[54] McKittrick, *Dear Science and Other Stories*, 5.

[55] McKittrick, 3.

[56] McKittrick, 29.

[57] Robin Wall Kimmerer's book *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants* (Milkweed Editions, 2013) is an example of different types of knowledges coming together. Dr. Kimmerer's book and work emerges from Traditional Ecological Knowledge (TEK), science, plant ecology, and botony. In *Braiding* Sweetgrass, she shares about ways in which she brings varying practices together to give form to a different practice. She shares about her student's investigation that grows beyond academia and Western knowledge systems in its method and goals (within the Department of Biology, State University of New York, College of Environmental Science and Forestry).

boundaries and placing oneself within research—by allowing one's thinking to be transformed in the process; by continuously reflecting on the process; by writing oneself into the research (I, me…) and acknowledging one's position within the project.

From the beginning of the project, I was wary of falling into the traps of portraying Native fire practitioners in California as victims of history, on the one hand, and the other, romanticizing their respective relations to fire. Mishuana Goeman's *Mark My Words: Native Women Mapping Our Nations* is useful in traversing this terrain. Goeman (Tonawanda Band of Seneca, Hawk Clan) weaves through literary works by Native women—E. Pauline Johnson, Esther Belin, Leslie Marmon Silko, and Joy Harjo—to mark movements in space while undoing settler boundaries. Goeman calls this (re)mapping.[58] She writes that "[b]y accounting for the various scales of geography in relation to Native peoples and a history of conquest, we can begin to understand the relationship between lands and [people] as more than just a surface upon which we travel or a descriptive geography."[59] Goeman offers (re)mapping as an imagining to shift away from geographies which render "various scales of space from the body to the nation...as property."[60] Operationalizing (re)mapping as a "principal method," generates movement to undo borders repeatedly. Inspired by this approach, in this research project with fire, movement is used to make visible how people, places, water, and fire are organized to interact and connect; and to trace movements within social, political, and economic organizations of people and things. The movement works against what seemed a natural place.[61] Stewardship required movement of people, of fire. Movement across fragments, into fragments, with fragments, to and from, from one place to another, forward. Movement as practice, movement amassing people. Movement of fire through grasses, while grasses hold moisture, controlling the intensity of the burn. Movement pieces together fragments. They are creating rehearsals. Movement is the antidote to hopelessness. Movement is a principle for the "organizing of land, [people], and social and political landscape."[62] When these growing and thickening movements become disrupted and restricted, they do not seize entirely. Goeman highlights this with the literary works she presents in *Mark My Words*. She shows the work that the authors do by setting up her response to the question: "[h]ow do poetry and literature intervene in the colonial logics that continue to erase Native presence on the land and

[58] Mishuana Goeman, *Mark My Words: Native Women Mapping Our Nations* (University of Minnesota Press, 2013), 3.

[59] Goeman, *Mark My Words,* 11.

[60] Goeman, 11. She asks: "What are the relationships set furthering colonization that continue to mark us today?

[61] Gilmore, Bhandar, and Toscano, *Abolition Geography*, 122.

[62] Goeman, *Mark My Words*, 3.

continue to accumulate Native land and bodies into the imaginative geographies of empire?"[63] Goeman tells us that she sees these texts as documents, that is, Native women at the center of "imagining and partaking in a future that produces possibilities for Native people."[64] She shares that she chooses literary works—poems, a novel, short stories—to "unsettle settler places" because 1) they are not limited to the recoupment of a "violent history or erasure" 2) the "forms of discourse, such as journalism, surveys, BIA/field reports, …etc.," obscure the presence of women 3) they offer imaginative approaches through imaginative modes.[65] There is an invitation in Goeman's question, "What happens when non-normative geographies are examined?"[66]

Following a different but related invitation now, in *Colonial Lives of Property: Law, Land, and Racial Regimes,* Brenna Bhandar urges us to think about dismantling racial regimes of ownership and provides a potential protocol for imagining and transforming property relations. She shares that it is crucial to understand the relations of land obscured by colonial mechanisms by examining and recovering its ontologies.[67] Bhandar tells the reader that different land relations can emerge from reconfiguring the social and political, but it requires a transformation of the "self and our relations with one another."[68] The preceding chapters of the book analyze how land and people are marked as property, and land is made exclusive for some and inaccessible to others across Canada, Australia, and Israel/Palestine. Bhandar uses a combination of theories to examine settler colonial modalities dispossessing people and enabling appropriation of homelands via property law. She brings together "Stuart Hall's theorization of articulation, [...] Cedric Robinson's conceptualization of racial regimes," and Cheryl Harris's "understanding [of] how whiteness has come to have value as a property in itself."[69] Bhandar proposes that property law can be broken down into three main strategies to appropriate land: abstraction, use, and status. She writes that the logics of abstraction have to do with land and people made into capitalized goods (since the 17th century); ideology renders land and people "in need of improvement" and to be in proper use; status, attached to identity and property, comes into jurisprudence.[70] Laying open mechanics of dispossession and appropriation, Bhandar focuses on the need to abnegate the construction of "race and property ownership" for a "radically different political imaginary of

[63] Goeman, 26.
[64] Goeman, 2.
[65] Goeman, 2.
[66] Goeman, 4.
[67] Brenna Bhandar, *Colonial Lives of Property: Law, Land, and Racial Regimes of Ownership* (Duke University Press, 2018), 9.
[68] Bhandar, *Colonial Lives of Property,* 193.
[69] Bhandar, 7, 9.
[70] Bhandar, *Colonial Lives of Propert,*13-14.

property."[71] Reflecting on Bhandar's analytical frameworks of use, improvement, and status helps understand, within the context of California, the different colonial and settler conceptions of the land as wildland—which under early US governance was an abstraction of different spaces/habitats/ecosystems, defined as unsettled areas. My curiosity was about how *unsettled areas* develop into and with the concept of the wildland-urban interface, coined in relation to *wildfires*. Within California, several definitions of the wildland-urban interface exist, and different definitions produce varying maps and interpretations. Nonetheless, in its essence, it refers to the proximity of housing and infrastructure to so-called "natural areas" at risk of *wildfires*. In my research, I have come to understand it as an abstraction. As I think about land use and property law, resource extraction, and access, *Colonial Lives of Property*, in its articulation and deconstruction of racial regimes of ownership, allows me a structure to use, reference, reflect on, and potentially build on. Abstraction, the ideology of improvement, the infamous eighteen unratified treaties of California, the ongoing recognition processes of Native people at the federal and state levels, and gendered property laws, all find grounding in Bhandar's proposals. As do social and political transformations of ways to relate to land for possibilities of land back and living as guests on Indigenous homelands.[72]

This moment brings me back to abolition geography.
I see these possibilities arise with *abolition geography*. A term proposed by geographer and activist scholar, Ruth Wilson Gilmore. While geography is understood as the relations of people, places, and things, abolition is understood as a theory of change, of transforming, and in which life is centered.[73] Although the word abolition means ending or stopping something, for instance, dismantling carceral systems and prisons, the theory emphasizes thinking about what people and communities make and grow for living—in all its senses—to end and remove impacts of the oppressive systems shortening lives.

Abolition geography– is a proposal of presence,
a process of world-making;
encompassing all life forms–humans, plants, water, social relations, culture;
supporting complex interdependent systems required for living;
conditions in which life can flourish.
It is with this that I think, imagine, dream, act, write.

[71] Bhandar, 193.
[72] Bhandar, 193.
[73] Gilmore (Zoom Review), TU Wien, 27 May, 2021.

Incessant note taking, partially shared here, reading these words repeatedly... and other texts. Listening. Listening. More listening. Processing. Reiterate. Wondering.[74]

Abolition geography is the methodological approach of the project. Gilmore describes it in many ways. It is world-making and presence—What people in specific places do differently to enable life to flourish.[75] Working to creatively navigate and produce living relations, relations for living, abolition geography is study. With the scope of living, abolition geography is a way to build context and design research (recall L. Smith). Abolition geography, Gilmore tells us, is where people make space for life to flourish.[76] Where life is precious.[77] It is the presence of what is needed for living.[78] Abolition geography is many things and it "starts from the homely premise that freedom is a place."[79] Gilmore's proposal is that abolition geography "*shows how relationships of un-freedom consolidate and stretch, but not for the purpose of documenting misery. Rather, the point is not only to identify central contradictions—inherent vices—in regimes of dispossession, but also, urgently, to show how radical consciousness in action resolves into liberated life-ways, however provisional, present and past.*"[80] It becomes a diagram for developing the project with fire. Identifying relations of fire, water, people, and places. Recognizing cultural burning towards "liberated life-ways."[81] Shifting and growing with fire to reproduce life in different ways. Imagining. Rehearsing. Living.[82]

Abolition geography is simultaneously concept, method, praxis, and living—it is of time.[83] Gilmore writes, "*the radical tradition from which abolition geography draws meaning and method goes back in time-space not in order to abolish history, but rather to find alternatives to the despairing sense that so much change, in retrospect, seems only ever to have been displacement and redistribution of human sacrifice. If unfinished liberation is the still-to-be-achieved work of abolition, then at the bottom what is to be abolished isn't the past or its present ghost, but*

[74] From listening to and reading and discussing with Ruth Wilson Gilmore and Katherine McKittrick and my peers in the course *GNDS 810 (Queens University): Black Geographies / EES 79903 (CUNY GC): Abolition Geography (*Instructors: Katherine McKittrick and Ruth Wilson Gilmore), August-December 2021; McKittrick, *Dear Science and Other Stories*, 4.

[75] Gilmore, Bhandar, and Toscano, *Abolition Geography*, 351.

[76] Gilmore, "Where life is precious, life is precious."

[77] Gilmore, "Where life is precious, life is precious."

[78] Gilmore, Bhandar, and Toscano, *Abolition Geography*, 474-475.

[79] Gilmore, Bhandar, and Toscano, 474-475.

[80] Gilmore, Bhandar, and Toscano, 475.

[81] Gilmore, Bhandar, and Toscano, 474.

[82] Ruth Wilson Gilmore, "Abolition on Stolen Land", Keynote for UCLA Luskin Sanctuary Spaces: Reworlding Humanism, October 9, 2020, https://vimeo.com/467484872.

[83] Gilmore, Bhandar, and Toscano, *Abolition Geography*, 474.

rather the processes of hierarchy, dispossession, and exclusion that congeal in and as group-differentiated vulnerability to premature death."[84] She gives us a lot to discuss here, including a valuable definition of racism. For one, to understand that abolition does not mean erasure or eradication, but rather, it focuses on differently reproducing the socio-spatial-environ—and it comes from presence. From reconfiguring and renewing social structures. So then, abolition is lived and living. Becoming, Gilmore tells us—is social, of time, of space.[85] Unfixed and incomplete. It is making, remaking, and rehearsing. Emerging. With one another. Intertwined in boundaries. Multiplying. Enduring. It demands study; it demands practice: militant, unfettering, of "relationships between people, places, and things"[86]—the definition of geography, Gilmore teaches me—and that "[b]eing a good geographer is going to look and see and then to challenge oneself in one's description of what one is seeing. But politically, it is giving all the attention you have to the thing so that you understand how it works."[87] And so, I ask how one (other than a good geographer) is to embrace Gilmore's call? Seeing. Unsettling. "Thinking geography to understand design."[88] With unfixed processes, varying tactics, changing, incomplete, always becoming. It is in one place and many places. locating disruptions, making, remaking. Rehearsing, emerging, connecting, in relation with one another, and yet to happen. Movements intertwined in boundaries, despite and because of boundaries, international, transnational. Imagining futures, collective presence. Multiplying, simultaneous, enduring, and growing. It is practice. It demands study. It demands practice. Militant. Unfettering. Seeing. Unsettling.

> *The world appears not as a panorama but as fragmented scenes.*
> *Fragments, Scale, Rehearsals*

In the early part of my research looking into the field of ecology, I noticed that studies on fire and wildfire predominantly sideline Indigenous fire practice in the context of California. It happens in different ways historically and in the twentieth and twenty-first centuries. Indigenous (fire) knowledges are not always accepted as scientific in Western knowledge productions. However, Native fire studies and scholarship on the ecological context of California, more often than not, are changing across many fields. This is in part due to a rise of Native scientists, scholar-practitioners, and scholar-activists, and better research practices and collaborations with Native elders (who are at times the lead in projects). Often,

[84] Gilmore, Bhandar, and Toscano, *Abolition Geography*, 475.
[85] Gilmore, Bhandar, and Toscano, *Abolition Geography*, 474.
[86] Gilmore (Zoom Review), TU Wien, 27 May, 2021.
[87] Card, *Geographies of Racial Capitalism with Ruth Wilson Gilmore*.
[88] Gilmore (Zoom Review), TU Wien, 27 May, 2021.

attention is brought to how Indigenous knowledge in California tends to exist in fragments because of the historical processes unleashed by colonization. It is also the case that boundaries between Disciplines (further) exacerbate and require knowledge systems to be fragmented and fragmentary. In Western productions (or decimation) fragmentation happens across time and space. Disconnected into past, present, and future; people separated from one another and place; people, from their languages; people dispossessed; extracted from societies. Land and water are fragmented into private property. Space and time are made fragmentary. Isolated. These fragments exist in, and as, many places and take multiple forms. However dislocated and de-formed, the project looks at the possibility of retrieving such fragments. The fragments are seen as part of a whole, dismembered by colonial and capitalist logics, but the project does not attempt to reconstruct whole—rather closely looks at certain fragments.[89] Relations of positions. Recuperating (from) fragments for living. Building on the ongoing work by the communities made vulnerable across Miwok, Maidu, North Fork Mono, Tongva, and Acjachemen homelands, beyond them, and across the global south. With fragments, Swati Chattopadhyay proposes rethinking the disciplinary technique of "bigness" which works with abstraction, in "Architectural History or a Geography of Small Spaces?"[90] Chattopadhyay uses smallness as a tool for knowledge production in writing architectural history. Making visible fragments and to some extent, processes of fragmentation, she reminds us that "[c]hildren, women, the outcast, the marginalized, the enslaved inhabit fragmented worlds. Seen from their circumcised positions the world appears not as a panorama but as fragmented scenes."[91] With this in mind, Chattopadhyay offers small spaces to the challenge she sets up, which is "to write the history of that spatial fragment."[92] She describes that "[smallness] involves the politics of materials and labor. Small spaces are fragments, products of division, isolation, and excision: they make up a fragmentary landscape created through repeated processes of racial, caste, gender, and class sorting."[93] Similar to Gilmore and Goeman, Chattopadhyay is interested in "other ways of viewing the landscape."[94] Studying the separation of served and service spaces in architectural plans, which are unable to reflect the social relations of the European masters and their servants and slaves in colonial India—where main spaces were constantly occupied by servants and slaves to better serve the needs of the master and mistress—Chattopadhyay tells the reader that "Small spaces can shock our collective naïve belief that spaces function as

[89] Smith, *Uneven Development*, 2.

[90] Swati Chattopadhyay, "Architectural History or a Geography of Small Spaces?" Eduard F. Sekler Talk, The Society of Architectural Historians. Virtual Lecture. 15 April, 2021. https://vimeo.com/537508419

[91] Chattopadhyay, "Architectural History or a Geography of Small Spaces?"

[92] Chattopadhyay.

[93] Chattopadhyay.

[94] Chattopadhyay.

they are intended."[95] Chattopadhyay activates the served spaces of the colonial Indian Bungalow to articulate the socio-political-economic conditions of the period in which labor was continuously extracted for the colonizer's household. Acknowledging that shifting from "subjection to subjectivity" is not a simple task, but with the text I learn there *are* possibilities and fragments *are* with knowledge.[96]

Continuing with fragments, in an essay titled "In Defense of the Fragment: Writing about Hindu-Muslim Riots in India Today," Gyanendra Pandey referenced a collection of poems about the Bhagalpur riots of 1989.[97] He wrote, "I present this fragment here not as another piece, or even another kind, of 'evidence'. I propose it, instead, as the articulation of another subject position … which may say something about the parameters of our own subject position and understanding."[98] I understand Pandey's proposal of a fragment as a socio-political process of space and scale. He argues that "[p]art of the importance of the 'fragmentary' point of view lies in that it resists the drive for a shallow homogenization and struggles for other, potentially richer definitions… ."[99] Could it not be that with certain fragments, becoming continues? That is, shifting from imperial-colonial-settler parameters and producing panoramas differently—elsewhere and otherwise?[100] This type of production, a type of transformation, is a fragmented process which does not arrive at a whole instantly. Becoming is a continuous process. Building up scattered fragments, not for a whole panorama, but rather, imagination. Using fragments to create otherwise, not entirely old, or new, is a process that recalls thickness and scale. Different from how scale ascribes to architecture. Scale as a measure available to relate to adjacencies, expanding and contracting, as necessary. With the potential of being in relations. However, its dominant functions in architecture—designing with, drawing with, representing with, interpreting with, and thinking with are often limited and demarcated in practices. Not because they must but rather because they shrink to certain vignettes (determined by parameters, desires, and systems of settler colonial, capitalist, or carceral productions). It is usual practice to incorporate within architectural productions—in drawings, representations, maps, images—marks enclosed by imperialistic worlds and settler endeavors and tropes. Certain knowledge is visible, while others remain hidden, undetected, unrecognizable at times, abstracted into oblivion, and made nonexistent.

---

[95] Chattopadhyay.

[96] Chattopadhyay, "Architectural History or a Geography of Small Spaces?"

[97] Gyanendra Pandey, "In Defence of the Fragment: Writing about Hindu-Muslim Riots in India Today." *Economic and Political Weekly*, vol. 26, no. 11/12 (1991): 569. JSTOR, http://www.jstor.org/stable/4397413.

[98] Pandey, "In Defence of the Fragment," 569.

[99] Pandey, 559.

[100] From listening to and reading and discussing with Gilmore, McKittrick and my peers..

These fragments, made to disappear in urban and suburban California, are not always possible to bring into view in the same ways. What are marked as forests today were lined with villages and towns near water sources and sustenance resources (food, medicine, cultural resources). At times with the movement of fire. But these are disrupted and replaced with something else. I ask how the vignettes can be operationalized differently. As small spaces? Scale in architecture operationalized otherwise—as time-space? Surely, something is appealing about engaging differently than with "bigness" and scale as size.[101] Thickness.[102] Bringing scale in architecture out of slumber and into activity. Unburying scale from the graveyard of size in architecture. It brings the potential to think across typologies of scale in geography. Gilmore reminds us of N. Smith's contribution to scale once again, as he asks "under the capitalist mode of production, what if we thought about scale as a kind of series of configurations of people, places, and things that capitalism exploits in order to reproduce itself, but which therefore are constructed of contradictions, which means we can seriously think about how to counter exploit, in the context of contradiction, and perhaps do something else."[103] Thinking with scale in this way, makes space for several types of fire relations to emerge and emanate—from soil, land, water, atmosphere, air quality, habitats, plants, and humans. Potentially retrieving conditions which enable presence and flourishing. Studying fire with the fragmentary and scale embraces multiple ways of thinking, bearing witness, and being in space and time. Fire brings together practices that enable and nurture just and secure relations of living at multiple scales. It evades the possibilities of categorization, classification, or isolation, and centering fire complicates disciplines spatially, temporally, ecologically, environmentally, culturally, and politically. It complicates the processes of knowledge production. Even in the prolonged future of a fire, when the lands and water become evidentiary material. As well, directly after a fire, when there is much to learn with the terrain in these specific ecosystems, and since the temporal scale of fire is expansive, much is learned decades and even centuries later. Reconstructions of fire can span centuries to millennia. The space of the fire is manifold. It does not begin or end with layers of soil, rather seeps into the depths, into the micro. It is the seeds and smoke. The tree ring records contain scars from fires (and at times traces not quite forming scars) and signs of drought. They disrupt and interrupt. In a way, somewhat like the scars from a fire disrupt and interrupt formations of tree rings. The sedimentary deposits in lakes or wetlands: space for ash to rest over time. The list goes on. Vividly producing and

[101] Swati Chattopadhyay, "Architectural History or a Geography of Small Spaces?"

[102] From listening to and reading and discussing with Gilmore, McKittrick, and my peers.

[103] Gilmore quoting N. Smith in "Ruth Wilson Gilmore on Abolition, the Climate Crisis and What Must Be Done" Kelly Hayes, Truthout, Published April 14, 2022, https://truthout.org/audio/ruth-wilson-gilmore-on-abolition-the-climate-crisis-and-what-must-be-done/

being produced. Fire brings new life and begins new life cycles. In this sense thinking about scale, geography and architecture (e)merge, "[w]hen you think of the body as one of this series of kinds of places."[104]

The fragmentary and scale create a potential to "redescribe the world."[105] Shifting from asking, "What do we have now and how can we make it better?" to "What can we imagine for ourselves and the world?"[106] To be produced as practice. To make life differently, Gilmore tells us, requires rehearsals. That "Life in rehearsal *is* its making." To live as if… .[107] …As McKittrick reminds us with "stories about black life. The stories begin from the premise that liberation is an already existing and unfinished and unmet possibility, laced with creative labor, that emerges from the ongoing collaborative expression of black humanity and black livingness."[108] ….As Goeman asks us to "look at what remains and could be important to living (Indigenous) peoples. It is to politicise the space as Indigenous and work toward the material groundings that could create healthy communities."[109] Rehearsals occupy space-time, "[l]ocating a dialogue that conceives of space not as bounded by geopolitics, but storied, continuous, and developing…"[110] Rehearsals are the process and method, of making, reconfiguring relationships.[111]

Working, reworking, designing. Rehearsals are the activity of practicing. For people, places, for living, for life to flourish. Requiring activity. Requiring practicing, rehearsing. Rehearsals are not static or complete, nor with an end. They are changes, reproducing change as practice, for practices. If making is rehearsal, processes required for living, then, so too, is designing for collective presence. Paying attention to how people are driven to do things differently over time (in specific time-space). Understanding that "abolition is life in rehearsal because freedom is a place."[112] Unscripted. Imagined but unknown, not yet known.

---

[104] Gilmore quoting N. Smith in "Ruth Wilson Gilmore on Abolition."

[105] Card, *Geographies of Racial Capitalism with Ruth Wilson*.

[106] Mariame Kaba, *We Do This 'Til We Free Us: Abolitionist Organizing and Transforming Justice*," Ed. Tamara K. Nopper (Haymarket Books, 2021), 5.

[107] Ruth Wilson Gilmore, F*ragments of Repair/Gathering II: "The Body's Legacies, Pt. 2: The Postcolonial Body*," with Kader Attia, Olivier Marboeuf and Maria Hlavajova, BAK, basis voor actuele kunst. Hybrid event. 2 May 2021, published on May 7, 2021, https://www.youtube.com/watch?v=Vyg1W3wv6mA

[108] McKittrick, *Dear Science and Other Stories*, 13.

[109] Mishuana Goeman, "Crafting Cartographies – Mapping LA," January 22, 2021, posted on 25 Jan 2021 by Fowler Museum, https://vimeo.com/504489940

[110] Goeman, *Mark My Words*, 117.

[111] McKittrick, *Dear Science and Other Stories*, 4.

[112] "Foreword by Ruth Wilson Gilmore," in Robyn Maynard and Leanne Betasamosake Simpson, *Rehearsals for Living* (Haymarket Books and Knopf Canada, 2022).

Gilmore's notes on McKittrick's project *Dear Science*, lay it out as a model and "shows how to crack open time and space."[113]

Notes On Processes[114]

With the approach of the project now set up, chapter one "False Categories: California in the Twenty-First Century" develops a context in which fire is made *wild* within California through colonial and capitalist processes. The thoughts are shaped by Bhandar's analysis to reflect on ways colonizers arriving in California, made land and people abstract and into racial subjects and property, along with conceptions of nature examined by Neil Smith. The chapter considers how historic processes, entailing views on nature and formations of racial subjects and modern property laws, shape the present socio-spatial environment. Chapter two, "California Dreaming. Perverse Ideologies and Defensible Spaces," attempts to outline the current landscape as appears in mosaics—not of vegetation but rather of hardened homes and hardened communities. Part of it traces the colonial, carceral, and militarized logics that drives design, on the one hand, making exclusive enclaves, and on the other, criminalizing movement of the most vulnerable in society. The chapter introduces and brings to light the colonial, carceral, and militarized vocabulary and terminology reused in the wildfire context: hardened, defensive, defensible, and resilience. Chapter three, "Southern California. Imperiled Landscapes" is a study of water and smoke situated in undoing the abstraction of the wildland-urban interface. Starting from the Santa Ana River into the City of Corona in Riverside County, part of the unceded homelands of the Cahuilla, Acjachemen, Tongva, Kizh, and Payómkawichum peoples, located in what is now known as the Inland Empire in Southern California. To understand movement, it brings together transforming landscapes that are made vulnerable through different forces in service of generating profit. It highlights detrimental changes in the socio-cultural and built environment in parts of southern California, the catastrophic results of which continue until today. Chapter four, "Rehearsals with Fire," thinks with Indigenous fire practices or cultural burning to navigate transforming human-environment processes for life to flourish. The chapter emphasizes cultural burning requires simultaneous thinking at and across various scales and identifies ways it is being operationalized for processes of decolonization. Learning to think with cultural burning, instead of practices of conservation, preservation, and rewilding based on dispossession,

[113] Ruth Wilson Gilmore, "A Possible Geography of Light at Dusk" *Society and Space*, September 27, 2021, https://www.societyandspace.org/articles/a-possible-geography-of-light-at-dusk

[114] Thinking with Smith, Uneven Development, xii.

unpeopling places, restricting places, and productivity and commodification in service of capitalism—cultural burning has the potential, along with other world making practices, for people to transition to inhabit place safely. Rehearsals with fire highlight groups of people who have organized to reintroduce cultural burning to their homelands while building transnational networks. Chapter five, "Living as Guests," looks to a region in Mariposa in the Central Valley, the homelands of the Southern Sierra Miwok—"a site of an 8,000+ year old Miwok village"[115] and is currently under the California Land Conservation Act of 1965, "which enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use."[116] Essentially, preventing urban development. It is a continuation of the previous chapter in some senses. While it is the last compilation of the project in this form, it is by no means a conclusion as the process must remain in motion, moving unapologetically toward making and renewing liberated places. It addresses and points to possibilities of world-making to embrace living as guests on unceded lands through architectural praxes for collective futures. Focusing on ways for architectural praxes to reconfigure (structurally and systemically) while following Indigenous leadership within the contexts of California.

[115] Christopher Adlam, Melinda Adams, Deniss Martinez, Beth Rose Middleton, "Keepers of the Flame," Winter 2020 Report (2020), 7.

[116] "Williamson Act," https://www.mariposacounty.org/1023/Williamson-Act#:~:text=The%20California%20Land%20Conservation%20Act,or%20related%20open%20space%20use.

Unequal development of a landscape

It provides, as Edward Said noted in Culture and Imperialism, 'a brilliant formulation of how the production of a particular kind of nature and space under historical capitalism is essential to the unequal development of a landscape that integrates poverty with wealth, industrial urbanization with agricultural diminishment.'

–David Harvey, 2008
Foreword in Uneven Development Nature, Capital, and the Production of Space by Neil Smith

Chapter 1.
False Categories. Southern California into the 21st Century.

Southern California's formation is tied intimately with mythmaking. As enduring traditions keep certain myths afloat, examining how myths appear and extend into knowledge production is crucial. That is, to drag them from the blinding brightness of the place of sunshine and expose their makings. For instance, I was reminded of how California got its name during the research.[1] It was the name of a fictional island in a romance novel. The Spanish explorers believed California was an island, and when they arrived, familiar with the island in the book, they called it California. As though it were a non-place embodying the desires of the Spanish colonizers. Desire preceded place. The colonizers misunderstood what they were seeing, they arrived in a place that was not "uninhabited wilderness" but instead "a carefully tended 'garden' that was the result of thousands of years of selective harvesting, tilling, burning, pruning, sowing, weeding, and transplanting."[2] The landscape in which the explorers and missionaries arrived is known through writings in dairies, journals, and letter correspondences. One can find descriptions of lush, *paradise*-like places with park-like forests and fire and smoke taking over various parts of the coast or meadows further inland at different times.

In "The Voyage of Juan Rodriguez Cabrillo," there is a reference to the "Bay of Smoke" or "*Baia de los Fumos.*"[3] It informs the reader that the name reflects the abundance of smoke they witnessed making their way in a region with "many

[1] Charles Sepulveda, "California's Mission Projects: The Spanish Imaginary in Riverside and Beyond," PhD diss., (University of California Riverside, 2016), 292-293.

[2] Anderson, *Tending the Wild*, 125-126.

[3] Henry R. Wagner, "Spanish Voyages to the Northwest Coast in the Sixteenth Century. Chapter IV: The Voyage of Juan Rodriguez Cabrillo." *California Historical Society Quarterly* 7, no. 1 (1928): 20–77, 47. https://doi.org/10.2307/25177918.

valleys, plains, and groves of trees."[4] Reading the document further, I notice that the explorers begin to make a relation between the presence of smoke and Native inhabitants as they continue along the coast: *"They saw neither towns nor smokes, as all the coast, which has no shelter from the north, is uninhabited."*[5] If places were uninhabited, or temporarily so, it is worth considering. In another instance, it is noted: *"The land along which they passed is very good in appearance, but they saw neither [Natives] nor smokes."*[6] However, "*On the southeast side of the Cabo de Martin, for fifteen leagues, they found the land inhabited and many smokes, as the country is good."*[7] There are mentions of the types of vegetation, plants, and animals scattered across the undulating landscapes. Detailed accounts of ecosystems and the presence of Native people in their homelands are usual. Native and Non-Native researchers have used much of this material to amass the appearance and functions of ecosystems within distinctive landscapes. Combined with existing Native knowledges passed down through oral traditions, Native and Non-Native scholars and practitioners in collaborative research with Native communities have been essential to *evidence collection*, supporting Native legacies of cultural burning in many regions of California.

California's current environments and landscapes are quite different from those under Native Stewardship. How the environment is physically articulated and maintained necessarily corresponds with the types of relations cultivated socially and culturally within systems for living. The Native homelands, where the colonizers appeared, were produced by centering reciprocal relationships with living beings and tended by such relationships. A part of stewardship for many Native people in California is the practice of cultural burning, also known as Indigenous fire. Cultural burnings are described as disturbances of low-intensity fire, known as good fire, with light smoke germinating seeds. These low-intensity burns do not scorch the earth. Instead, they generate biochar, an unburned plant material that absorbs Nitrous Oxide and Methane, and every pound of biochar prevents the formation of 3.6 pounds of carbon dioxide.[8] In contrast, destructive wildfires burn all material and subsequently lose the ability to absorb and prevent gases—producing thick, excessive, harmful smoke.[9] However, as reflected in most historical policies and regulations, US institutions do not widely recognize these practices for their previously expansive operations. Although accounts of large

[4] Wagner, "Spanish Voyages to the Northwest Coast in the Sixteenth Century," 47.
[5] Wagner, "Spanish Voyages to the Northwest Coast in the Sixteenth Century," 50.
[6] Wagner, "Spanish Voyages to the Northwest Coast in the Sixteenth Century," 50.
[7] Wagner, "Spanish Voyages to the Northwest Coast in the Sixteenth Century," 51.
[8] Chris Paulus and Frances Ragle, "Indigenous Management Practices (IMP) with the applied use of Traditional Ecological Knowledge (TEK)," virtual lecture, April 6, 2021, posted April 7, 2021, by Return California (Return California's 1st Tuesday of April Listening Roundtable), YouTube, 1:33:02, https://youtu.be/wfQkipCGDu0?si=rWNR1ocU4VtL3oGu.
[9] Paulus and Ragle, "Indigenous Management Practices…"

swaths of land on fire (usually good fire) appear in early colonial documentation, fire has gained a primarily singular reputation as a destroyer due to misconceptions and outlawing practices by Spanish colonizers and the US settler state. While Native inhabitants manipulated ecosystems for many different reasons, dominant prevailing ideas continue to be that of nature *untouched* or *untamable*. *Wild*.

Understanding how and why colonial and settler logic produces these views and how they stay embedded in the sociocultural perceptions of the environment is part of undoing the myths shaping California. Analyzing the types of places these produce informs this chapter.[10] One way to begin is by recalling Bhandar's analysis of the similarities in colonial techniques used to appropriate land across the varied contexts of Canada, Australia, and Palestine/Israel.[11] While Bhandar outlines a set of approaches (abstraction, ideology of improvement, and status) unfolding in these distinct places, she tells us it is essential to understand that the particular "social and historical processes" inform and determine how property laws and racial structures form.[12] For the purposes of my research, I find Bhandar's study of *abstraction* and *use* necessary foundations to look at the types of places that develop in California when Indigenous people are deemed as racial subjects, and their homelands are marked by modern property laws. Tracing British colonization in South Australia, Bhandar shares that "the racial abstraction embodied in the figure of the [...] Native, encoded in the doctrine of terra nullius, reflects a dual vision of property and race that colonists carried with them to South Australia."[13] She delineates that the racist conception of "civilized and noncivilized" gave footing to the idea of terra nullius or "vacant land."[14] Arguing further that dispossession was not solely embedded in racism, rather "[d]ispossession was both a prerequisite and a consequence of the coproduction of racial value and property ownership, rendered by a logic of abstraction."[15] She tells us that since the 17th century, the logic of abstraction sustained the view of land and people as commodities.[16] The commodity logic of abstraction is grounded in the annulment of any preexisting conceptions of land.[17] In contrast, the abstract logic of commodity is organized under the racial rubrics of humans.[18]

[10] To study through scale and space.
[11] Bhandar, *Colonial Lives of Property*, 6.
[12] Bhandar, 100.
[13] Bhandar, 82.
[14] Bhandar, 102.
[15] Bhandar, 102.
[16] Bhandar, *Colonial Lives of Property*, 26.
[17] Bhandar, 29.
[18] Bhandar, 29.

In discussing use or the ideology of improvement, Bhandar writes, "the concept [...] retains its place at the heart of [I]ndigenous struggles."[19] The ideology of improvement sees land cultivated in ways other than European methods as needing improvement and the people cultivating lands in other ways as being "less than civilized" and themselves needing improvement.[20] Land designated for improvement is to be used in ways that create the possibility of accruing value and acquiring profit. In her analysis, Bhandar looks at how the ideology of improvement consolidates in Palestine/Israel. She finds that the perception Zionist settlers had of the Palestinian's customary or preferred stewardship of the land was that it "reflected an inferior intellectual capacity and less developed culture."[21] Bhandar states that concepts of deficient use and racial structuring "relegated [I]ndigenous people to the margins of civility and deprived them of the status required to be owners of their land."[22]

While Palestine is a distinct place under occupation, it is brought together in a type of relation with California when Bhandar described a prominent figure of the Zionist settlement in Palestine, Arthur Ruppin, reached out to an American agriculturist because he saw parallels in the colonial processes in Palestine and California.[23]Correspondingly, I recalled Mike Davis sharing that "geomorphologists working in Israel and California have so eagerly adopted catastrophe theory as a framework for understanding landscape processes."[24] In California, the colonial conceptions of the land as *wildland* operated on the abstraction of different spaces, habitats, and ecosystems as unsettled lands. Under early U.S. occupation, these unsettled areas were developed as agricultural, urban, commercial, or recreational areas (i.e., National Parks and National Forests). As rapid development continued into the twentieth century, some areas came to be classified as the wildland-urban interface, a term coined corresponding with wildfires. Within California, there are several definitions of the wildland-urban interface, and specific definitions inform the various maps and interpretations. Nonetheless, in its essence, it refers to the proximity of housing and infrastructure to so-called "natural areas" at risk of wildfires. Derived from the abstraction of *wild,* the wildland-urban interface is an abstraction by proxy.

The unregulated and *sprawling* urban development in Southern California is a contentious topic that permeates sensibilities across the region's spectrum. Mike

[19] Bhandar, 34.
[20] Bhandar, 29.
[21] Bhandar, 29.
[22] Bhandar, 113.
[23] Bhandar, *Colonial Lives of Property*, 120.
[24] Mike Davis, "Los Angeles After the Storm: The Dialectic of Ordinary Disaster," *Antipode 273*, 1995, 227.

Davis vehemently opposed the developers' shaping places, for society's upper echelon, in ways that exacerbated environmental conditions and caused irreparable long-term impacts. Davis critically analyzed persistent myths about Southern California and how they distracted from the relations at hand. For this research, I am most interested in Davis's centering of the environment within varying socio-political and economic conditions in *Ecology of Fear* and *City of Quartz*.[25] In *Ecology of Fear*, Davis noted that with a series of devastating floods, earthquakes, an insurrection, and a firestorm between 1992 and 1997, there was a feeling of dread about the future of Los Angeles.[26] A sense that *nature was rioting*.[27] Davis explained that the so-called natural disasters have more to do with the fact that Los Angeles is *manufactured as an idea* and built prioritizing economic gain and political capital. Placing lives in peril under conditions produced by a detachment from reality. He tells us that "the social construction of 'natural' disaster is largely hidden from view by a perverse ideology that simultaneously imposes false categories and expectations on the environment, and then explains the inevitable.[28]

City of Quartz, Davis described, is a "biography of a conjuncture: one of those moments, ripe with paradox and non-linearity, when previously separate currents of history suddenly converge with profoundly unpredictable results."[29] I consider how conceptions of *nature* and related envisages of the *wild* are intertwined in this conjuncture. In various ways, the constructs of nature as *wild* are violently reproduced in space-time as they form and animate the organization of people, land use, and land management in California. Disproportionately dispossessing, disenfranchising, and, at times, poisoning people and places. With complexities, contradictions, and nuances—fire is made *wild* even though it has long been a part of these Native homelands, with Native people shaping their landscapes and lifeways since time immemorial. Understanding the ideological shifts in making fire *wild* under colonial logic and how it is reproduced with capitalism sheds light on the type of places that come to be in California. As it seems largely hidden from public view—to the detriment of our collective futures on these Indigenous homelands—I attempt to emphasize the *social construction* of fire as *wild*. In hopes that it will make way for more productive analyses of these environments rooted in reality.

---

[25] Mike Davis, *Ecology of Fear: Los Angeles and the Imagination of Disaster* (Verso, 2020). Mike Davis and Robert Morrow. *City of Quartz: Excavating the Future in Los Angeles*. Second Edition (Verso, 2006).

[26] Davis, *Ecology of Fear*, e-book.

[27] Davis, e-book.

[28] Davis, e-book.

[29] Davis, *City of Quartz*, vi.

The American journey into the wilderness

A colonial conception of *wild* is marked by notions of a pristine and untouched nature, devoid of influence by humans, and devoid of humans. Majestic, unsettled areas. Another view of *wild* is that it is for Man to tame. To dominate, control, and domesticate to serve Man.[30] In these conceptions, nature is "an abstraction– separate from humans and not understood, not real."[31] It is worth reflecting on how nature remains a characteristic feature in the ideological perceptions and production of the social and spatial. In a rich study illustrating Western notions of nature, along with the production of space and nature in the twentieth century, N. Smith articulates:

> [T]he concept of nature is extremely complex and often contradictory. Nature is material and it is spiritual, it is given and made, pure and undefiled; nature is order and it is disorder, sublime and secular, dominated and victorious; it is a totality and a series of parts, woman and object, organism and machine. Nature is the gift of God and it is a product of its own evolution; it is a universal outside history and also the product of history, accidental and designed, wilderness and garden. In our range of conceptions of nature, all of these meanings survive today, but even in their complexity they are organized into an essential dualism that dominates the conception of nature.[32]

Perhaps what Davis refers to as a perverse ideology can be better understood by thinking with what Smith offers as the *ideology of nature*.[33] Smith tells us that it is fruitful to examine conceptions of nature because while the dominant approaches have at their foundation the separation of nature and humans (society), capitalism unabashedly brings them together. The production of nature, Smith insists, must be discussed together with uneven development in the twentieth century, as it is "a very real result of the development of this mode of production.[34] That is, "[u]neven development is the concrete process and pattern of the production of nature under capitalism."[35] Smith argues that from the older perceptions of nature, those that did not align with industrial capitalism are somewhat "co-opted" and reworked.[36] Elaborating the ways in which western thought views nature dominantly within the dualism of external (to human/society) and universal (i.e., human nature, internal), he acknowledges that the distinctions are neither

---

[30] The term *domesticate* is used in thinking with Sepulveda, "Our sacred waters."
[31] Anderson, *Tending the Wild*, 110.
[32] Smith, *Uneven Development*, 11.
[33] Foreword by David Harvey in Smith, *Uneven Development*, vii.
[34] Smith, *Uneven Development,* 7.
[35] Smith, 8.
[36] Smith, *Uneven Development*, 11.

"absolute" nor "cleanly separated."[37] Smith offers an analysis structured by scientific, poetic, and Marxist views to demonstrate the succeeding notions. Briefly explaining the abstraction and externality that remains embedded in the sciences from the seventeenth-century foreword, Smith observes that in modern science emerges a universal view. While attempts were made to unite these positions, the dualism of nature remains dominant, but with nuances.[38]

Within the poetic view, Smith describes a "moral geography" which is partially distinctly an American formation of an American Landscape, nonetheless "in part a European artifact."[39] It embodies the "contradiction between nature and 'civilization,'" but Smith points out that while this is a "sharper social symbol and more revealing in the American tradition," it is no less a complex view of nature.[40] Here, too, Smith writes, the dualism of external and universal nature pertains to "the conception of nature that resulted from the American journey into the wilderness."[41] The notions that galvanize the American Landscape are expressed through wilderness.[42] Added to this view of nature, by the nineteenth century, is God.[43] An amalgamation of nature and God– "this christianized naturalism also took on a strong nationalistic flavor…. The ideology of manifest destiny, with its ambiguous mix of nationalism and religious universality, was built on precisely this foundation."[44]

Smith continues to dismantle the *ideology of nature* by analyzing how it functions socially and politically as it maintains the dualism of external and universal while being refashioned and revised over time.[45] In the twentieth century, Smith sees the relations of nature informed by the "social relations of capitalism."[46] He observes that while it is not remarkable that capitalism produces nature, what is remarkable is that via capitalism "human beings produce nature at a world scale."[47] When capitalism is considered *natural*, "treated not as historically contingent but as an inevitable and universal product of nature" *human history* is exonerated.[48] Smith continues to present Marx's argument that capitalism and the "law of value" have "no natural basis," instead that it is "clearly the result of a past historical

[37] Smith, 12.
[38] Smith, 12.
[39] Smith, 18 on "Leo Marx calls the moral geography of nineteenth-century America."
[40] Smith, 18-19.
[41] Smith, 19.
[42] Smith, 18, 20.
[43] Smith, *Uneven Development,* 23.
[44] Smith, 23.
[45] Smith, 29.
[46] Smith, 69.
[47] Smith, 71, 77, 78.
[48] Smith, 29.

development, the product of many economic revolutions, of the extinction of a whole series of older forms of social production."[49] To conclude the analysis presented by Smith, I add his observation that neither under capitalism nor any other type of organization has nature been controlled. Rather, nature is produced under capitalist modes or generally by other means.[50] He suggests to consider "*how* we produce nature and *who* controls this production of nature."[51]

The Making of Fire as Wild in California

On the one hand, *the idea of wild* operates as a mechanism that continuously makes land available for avaricious extraction, conspicuous consumption, poorly planned urban developments, contamination-causing commercial facilities, death-dealing detention centers, and more. *Wild* is subsumed in capitalist and carceral logic. On the other hand, *wild* assumes the complexities and contradictions of Nature as pristine and untouched yet at the same time to be dominated. Kat Anderson notes "These seemingly contradictory attitudes—to idealize nature or commodify it—are really two sides of the same coin, what the restoration ecologist William Jordan terms the 'coin of alienation.'"[52] Two sides of the same coin congealed by extractivism and aesthetics. Attributes of *wild,* adopted in constructions such as the wildland, wilderness areas, wildfire, or wildland-urban interface—not just in the syntax—identify and produce very particular material conditions that have persisted well into the present. Reflected on occupied lands in the substantiations of soil, grasslands and the lack thereof, shrubs, fire regimes, and ecosystems—the concept of wild marked life as vulnerable. In determining the land in California as wildland, the European colonizers and settlers (differently) rendered it unsettled, undeveloped, and unused: This constructed view of California "as unspoiled, raw, uninhabited nature—as wilderness—erased the [I]ndigenous cultures and their histories from the land and dispossessed them of their enduring legacy."[53] While the abstraction of wild yielded power in shaping the American Landscape, Natives understand the connotations of wild differently: "a negative label" for neglected places and impaired relations.[54]

Here wild is reflected as a loss, a type of void, absence or discontinuity. The abandonment of relations determining place as wild. As though the colonizers had recast and foreclosed the Native homelands as wild. The processes of making

[49] Marx quoted by Smith, *Uneven Development*, 69.
[50] Smith, *Uneven Development*, 87-88.
[51] Smith, 89.
[52] Anderson, *Tending the Wild*, 110.
[53] Anderson, *Tending the Wild*, 3.
[54] Anderson, 3.

land wild, under Spanish, Mexican, and U.S. occupation, are entrenched in law, regulation, policy, land use, and planning in distinct ways. Here, I focus on the US where during the nineteenth century, "the American dream was to conquer the wild lands, and displace [N]ative populations, in order to settle the continent and fulfill the nation's 'manifest destiny.'"[55] With rapid capitalist growth in the twentieth century, wildlands are valued for their potential for resource extraction that "first the U.S. Forest Service and then Congress sought to preserve and protect. In 1964 (author's note: The Wilderness Act), the United States became the first country in the world to designate wilderness, 'untrammeled' areas 'where man himself is a visitor who does not remain'."[56] Ideology mediated by policy produces place.

In a general technical report from 1976 titled "Wildland Planning Glossary," wildland is defined in four overlapping categories.[57] The descriptions briefly sketch out non-urban areas, forests, at times managed lands that "are not truly wild," untouched lands, uncultivated lands, and land "unfit for cultivation."[58] A South Coast Air Quality Management District (SCAQMD) regulation *Rule 444* first adopted in 1976 and amended six times until most recently in 2013, is more precise in its descriptions of the wildland. Included in the descriptions is uncultivated land illustrated as land where "the soil is disturbed less frequently than once in 10 years."[59] One definition which is distinct, but not necessarily unique or precise being that it is adheres to abstract and vague characteristics, relates to the California Department of Forestry and Fire Protection: "'Wildland' means any land that is classified as a state responsibility area."[60]

While the wildlands are described and classified in a myriad of peculiar ways, the aesthetic is valued. There has been a desire to be close to the wildlands—to be abutted with what is understood as natural, undeveloped landscapes—in areas of

---

[55] M. C. Blumm and A.B Erickson, "Federal Wild Lands Policy in the Twenty-First Century: What a Long, Strange Trip It's Been," *Colorado Natural Resources, Energy and Environmental Law Review 1,* 25, (2014): 4, https://www.colorado.edu/law/sites/default/files/Blumm%20&%20Erickson%20Federal%20Wild%20Lands%2025.1.pdf

[56] Blumm and Erickson, "Federal Wild Lands Policy in the Twenty-First Century."

[57] Charles F. Schwarz, Edward C. Thor, and Gary H. Elsner, "Wildland Planning Glossary." USDA Forest Serv. Gen Tech. Rep. PSW-13, Pacific Southwest Forest and Range Exp. Stn., Berkeley, Calif. (1976): 232-233, https://www.fs.usda.gov/psw/publications/documents/psw_gtr013/psw_gtr013.pdf

[58] Schwarz, Thor, and Elsner, "Wildland Planning Glossary," 232-233

[59] "Rule 444. Open Burning," 2013: 444-7, http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-444.pdf or https://www.aqmd.gov/home/rules-compliance/compliance/open-burn#:~:text=Purpose%3A,protect%20public%20health%20and%20safety.

[60] "SB-2053 Legal entities…" California Legislative Information. https://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill_id=199319940SB2053&showamends=false

California since the twentieth century. Davis writes about the entanglements of the burgeoning housing developments in southern California since the latter part of the twentieth century. Favoring capitalist imperatives, expansion in real estate, and perilous environmental impact, "Los Angeles' urban fabric continues to be extended into [...] mountain fire ecologies."[61] Bringing together the untenable political, economic, and social with the inadequately understood environment, in 1995 Davis wrote, "Southern California has reaped flood, fire and earthquake tragedies that were as avoidable, and unnatural, as the beating of Rodney King and the ensuing explosion in the streets."[62]

Through processes of (sub)urbanization in southern California, the aesthetic of wilderness is a coveted commodity. It is nature as the extractable sublime.

In *Colonial Lives of Property*, Bhandar explains that "settler states are imposing new means of appropriating and reappropriating indigenous lands that are consistent with the organization of contemporary land markets."[63] This is certainly true in California. An article from 2020 suggests that "home ownership in a fire-prone, wildland-adjacent neighborhood has become an increasingly valuable investment for those who can afford it."[64] The concept of the Wildland-Urban Interface (WUI) first appeared in a research budget document prepared in 1987 by the US Forest Service, which grew out of fire and water concerns of the U.S. Defense Atomic Support Agency and the U.S. Office of Civil Defense. These agencies became aware (convinced, rather, as there was an understanding of the risk of fire amongst those who were bringing it to the federal government's purview) of *mass fire* as a possible threat to urban areas through simulations of the impacts of a nuclear attack.[65] One of the sites chosen for the simulations was at the California-Nevada border.[66] The consequent report in the form of the document from 1987 describes the WUI. It appears to be located in "large urban areas...adjacent to State, Federal, and private forest lands, the intermixing of city and Wildland."[67] What it signifies is "major problems in fire protection, land use

[61] Davis, "Los Angeles After the Storm," 235.

[62] Davis, 223.

[63] Bhandar, *Colonial Lives of Property*, 27.

[64] Jessica Debats Garrison and Travis E. Huxman, "A tale of two suburbias: Turning up the heat in Southern California's flammable wildland-urban interface." *Cities*,104 (2020): 5. https://doi.org/10.1016/j.cities.2020.102725

[65] William T. Sommers, "The Emergence of the Wildland Urban Interface Concept." *Forest History Today*. Fall (2008): 15-16

[66] Sommers, "The Emergence of the Wildland Urban Interface Concept," 13-16 referencing U.S. Department of Agriculture, "1988 Budget Explanatory Notes for Committee on Appropriations–Forest Service," 1987. The 1988 federal fiscal year ran October 1, 1987–September 30, 1988]

[67] Sommers, 13 quoting "1988 Budget Explanatory Notes for Committee on Appropriations–Forest Service."

planning, and recreation impacts."[68] Agencies and institutions continue using and describing the term WUI. One article explains that the WUI in Southern California is consolidated in the coastal areas. It tells that the likelihood of recurrent wildfires is due to the Mediterranean climate, accumulated fuel loads, and "proximity to ignition sources from urban areas and roads."[69] The authors note that they define Southern California "as the...ten counties, which collectively cover the southern portion of the state: Imperial, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura."[70] Another article defines the WUI as "The encroachment of urban development into largely natural areas. In California this interface often occurs in foothills and higher-elevation areas that developed more recently after valleys and lower-elevation agricultural lands were fully developed."[71] A compilation titled *Encyclopedia of Wildfires and Wildland-Urban Interface Fires*, tells the reader that the WUI "is the area where wildland vegetation meets or mixes with humans and their development, including houses and infrastructure. The term is mainly used in the context of wildfire to define the potential risk that WUI fires pose to human settlement."[72] The California Fire Science Consortium, coordinated by UC Berkeley, describes that "Due to the ubiquitous nature of fire losses in the wildland-urban interface of California, the WUI module of the California Fire Science Consortium encompasses the entire state."[73] *The WUI is defined and interpreted in different ways, even within California.*

Smoke impacts will be highly variable in both space and time

Under colonial legacies and capitalist endeavors, processes of social and spatial organization rupture landscapes and deteriorate environments. At times ecosystems are pushed beyond limits and made toxic. Not bound to fixed forms, the toxic matter spreads, seeps, unseen, invisible, and yet known—released into and moving with water, air, and sediment, contaminating plants, animals, and humans. At other times, visible for shorter durations, they appear as smoke engulfing the atmosphere.

---

[68] Sommers, 13 quoting "1988 Budget Explanatory Notes for Committee on Appropriations–Forest Service."

[69] Garrison and Huxman, "A tale of two suburbias," 2.

[70] Garrison and Huxman, "A tale of two suburbias," 4.

[71] Mooney and Zavaleta, *Ecosystems of California*, 893.

[72] Manzello, *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*, 1167.

[73] "Wildland-Urban Interface (WUI)," California Fire Science Consortium, n.d., https://www.cafirescience.org/wui-ca?rq=Due%20to%20the%20ubiquitous%20nature%20of%20fire%20losses

On September 9, 2020, the National Oceanic and Atmospheric Administration/ Cooperative Institute for Research in the Atmosphere released an image labeled "Massive smoke layer consumes Pacific West Coast." It captures moving plumes of smoke across occupied land territorialized as the US.[74] The smoke is from the *wildfires* scattered across California, Oregon, and Washington.

The wildfire has expansive scales and registers.
(wild)fire is a reaction, a process of combustion;
moving from unstable to stable forms, (wild)fire is not singular, it is a part of, made of, from, in reaction to/with and it produces;
produced, producing;
changing, making anew.
The (wild)fire is complex and nuanced.
Wild, in itself, is an abstraction worth undoing.
Wild is a constructed colonial understanding, a colonial incarnate.
Wild is a scientifically accepted terminology—burgeoned with coloniality: categorizing, a familiar and foundational feature of Western epistemology (inadvertently acknowledging the absence of knowledge—on the part of coloniality).
Wild, as a category, manifests a type of civilness that is nothing if not harmful, Humanness that is separate from Nature.
But here, wild is also nature: lush, pristine, untouched, uncontrollable, hence, wild; destructive, sublime;
wild is contingent, multiple.

In a sense, wild is property, dispossession, wild is criminalized.

Wildfire, too, suffers the same fate for some time.

On the same day, a Wednesday, the South Coast Air Quality Management District released a smoke advisory stating, "Smoke transported from fires in Central and Northern California may also contribute to widespread elevated PM2.5 concentrations (author's note: fine particulate matter). Smoke impacts will be highly variable in both space and time through Thursday."[75] Such advisories are a

[74] NOAA/CIRA/RAMMB (National Oceanic and Atmospheric Administration/ Cooperative Institute for Research in the Atmosphere), 2020-09-10 – Massive smoke layer consumes Pacific West Coast – GOES-17 GeoColor [https://rammb2.cira.colostate.edu/].

[75] "South Coast AQMD Continues Smoke Advisory Due to Bobcat Fire and El Dorado Fire," South Coast Air Quality Management District. Announcements. September 9, 2020, 2

familiar feature in California and for the year 2020, CALFIRE and Federal agencies reported 4,304,379 acres burned by 8,648 fires.[76]

The term *wildfire* is used for unintentional mass fires in California and the US West Coast.[77] During the research, it has become evident that wildfires are a part of the political-economic organization of land as property and commodity. Shaped by desires and policies of land management and land use since the US Land Ordinance of 1785, over time, different stakeholders preserve and uphold the acquisition of appropriated and unceded Indigenous homelands. Although cultural burning was banned earlier under Spanish rule for some time, under the US governance of California, it was not until 1850 that widespread Indigenous fire practices were criminalized, and, consequently, reduced to a diminished presence barely visible to the incurious eye. Given the ongoing occupation and continuing changes in land use and fire and smoke regulations—driven primarily by neo-liberal capitalist enterprises in the present—the amount of cultural fire on Native homelands in California differs from place to place with fluctuating intervals.

An early instance of a Spanish colonial ban on burning practices by Native people around Southern California comes as a proclamation, *Arrillaga's Proclamation*, in 1793. It was prepared by Governor Jose Joaquin de Arrillaga in Santa Barbara for its province of *The Californias*, in response to the "various complaints…about the serious damage that results from the fires that are set each year…and having been informed not only by various officials but also by different mission fathers that the aforesaid damage is true."[78] The proclamation was penned on May 31, 1793, and cautioned the Indigenous peoples of Alta California against the use of fire, de Arrillaga demands that the "corporals of the guard, commissioners, and magistrates of the towns" as well as the "Reverend, Fathers, priests of the missions" do their part.[79] What follows is an "order and command…to take whatever measures they may consider requisite and necessary to uproot this very harmful practice of setting fire to pasture lands, not omitting any means…"[80] In a letter to

---

http://www.aqmd.gov/docs/default-source/news-archive/2020/bobcat-and-eldorado-fire-sept9-2020.pdf

[76] "Wildfire Activity Report," Redbook, California Department of Forestry and Fire Protection Office of the State Fire Marshal, 2020, 1 https://www.fire.ca.gov/media/0fdfj2h1/2020_redbook_final.pdf

[77] Quoted in USDA and USDI, "Urban wildland interface communities within vicinity of Federal lands that are at high risk from wildfire," 753.

The land is categorized as *wild land,* and the area "where humans and their development meet or intermix with wildland fuel" as the wildland-urban interface (WUI).

[78] Quoted in J. Timbrook, J.R. Johnson, and D.D. Earle, "Vegetation Burning by the Chumash," *Journal of California and Great Basin Anthropology 4*, no. 2, (1982): 163-186, 170. https://escholarship.org/uc/item/1rv936jq.

[79] Timbrook, Johnson, and Earle, "Vegetation Burning by the Chumash," 171.

[80] Timbrook, Johnson, and Earle, 171.

the "Padre Presidente of the Missions" sent along with the proclamation, de Arrillaga points "particularly [to] the old women, not to become liable for such offense."[81] The Padre Presidente wrote back reassuring the Governor and committing to all necessary measures to prevent "the horribly destructive fires."[82]

Under U.S. governance, in 1850, a section of the Crimes and Punishment addressed what was considered a menace and destroyer, fire—fining those involved in setting a fire "not less than twenty dollars, nor more than five hundred dollars."[83] It did not include those burning what they owned and who had given their neighbors prior notice.[84] 1852 adapted a different terminology: "The act of 'procuring' the setting of fire was made a crime. 'Lands' was added to the places where a fire should not be set. A 'court of competent jurisdiction' was specified as the necessary place of conviction. The possible fine was raised to $200-$1,000, and a 10-day to 6-month sentence in the county jail was prescribed."[85] Nonetheless, Anderson reminds us of the nuances in attitudes toward fire into the early 1900s:

> A 'light burning' versus 'no burning' controversy began, pitting timbermen and ranchers against those pushing for fire suppression. The timbermen and ranchers argued that light, frequent burning was necessary to prevent catastrophic fires and was beneficial to timber and grazing habitat. This view was supported by some government officials. For example, the acting superintendent of Yosemite National Park in 1903 advocated 'a return to the old [Native] custom of systematically burning over portions of the forests of the park each year in the autumn.'[86]

However, "no burning" prevails and captures the dominant public consciousness as furthered by preservationists such as John Muir. It was not until 1910 (the same year as the establishment of the US Forest Service) that "Community-based ignitions, by Indians and American settlers, were eventually outlawed and considered arson by federal and state agencies …and…replaced with more effective agency-directed fire suppression and exclusion practices."[87] This was consolidated by the Weeks Act of March 1, 1911, which expanded fire

[81] Timbrook, Johnson, and Earle, 170.

[82] Timbrook, Johnson, and Earle, 171.

[83] C. Raymond Clar, "1959 - California Government and Forestry from Spanish Days Until the Creation of the Department of Natural Resources in 1927," Miscellaneous Documents and Reports, 54 (State of California Documents, 2018), 60. https://digitalcommons.csumb.edu/hornbeck_usa_3_d/54

[84] Clar, "1959 - California Government and Forestry from Spanish Days Until the Creation of the Department of Natural Resources in 1927," 60.

[85] Quoted in Clar, 61.

[86] Anderson, *Tending the Wild*, 119

[87] Lake, "Trails, Fires, and Tribulations," 21.

suppression measures and funded "the protection from fire of the forested watersheds of navigable streams; and…the organization and maintenance of a system of fire protection on any private or state forest lands…"[88] The Forest Service then introduced a *10 a.m. rule* in 1935, which meant it took all measures to contain a reported fire by 10 a.m. the following morning. It gained popularity amongst federal agencies managing land. To deepen the perception of fire as a destroyer in the public realm, in 1944, the Forest Service introduced Smokey Bear with the original catchphrase 'Smokey Says – Care Will Prevent 9 out of 10 Forest Fires.' In 1947, it became 'Remember... Only YOU Can Prevent Forest Fires.'"[89] Somewhat echoing the US Army recruiting campaign: "I want YOU for U. S. Army."[90] The last updated catchphrase was in 2001, and quite succinctly stated– "Only You Can Prevent Wildfires."[91] With the introduction of prescribed burning in settler agencies starting in the 1970s, Smokey Bear was eventually *retired*. However, not until 2022, at the age of 78.

It is worth mentioning that in earlier campaigns, the Forest Service combined fire prevention with the US victory in WWII. The relationship did not begin or end there.[92] Fire scholar-activist-practitioners William Tripp (Karuk Tribe) and Tony Marks-Block note, "The fire suppression infrastructure developed a command and control culture akin to US military campaigns, and received large financial investments to ensure the protection of timber and residential structures.[93] I address two salient points brought up by Tripp and Marks-Block about fire suppression in the following chapters– the "effects of political economy on fire" and that "Fire suppression policies and investments remain persistent and constrain efforts to expand the pace and scale of prescribed burning in California."[94]

The controlled application of fire

---

[88] Congress.gov. "Congressional Record." (last) accessed 21 August, 2024. https://www.congress.gov/congressional-record/61st-congress/browse-by-date. Sixty-first Congress. Sess. III. Chs . 181, 185, 186. (1911), 961.

[89] Westover, "Coming up in 2024: Smokey Bear turns 80."

[90] James Montgomery Flagg, Artist. *I want you for U.S. Army: nearest recruiting station / James Montgomery Flagg*. United States, ca. 1917. Photograph. https://www.loc.gov/item/96507165.

[91] Smokey Bear web page, https://smokeybear.com/.

[92] "About the Campaign," Smokey Bear web page, https://smokeybear.com/en/smokeys-history/about-the-campaign.

[93] Tony Marks-Block and William Tripp, "Facilitating Prescribed Fire in Northern California through Indigenous Governance and Interagency Partnerships." *Fire*, 4, 37 (2021):1, https://doi.org/10.3390/fire4030037, https://www.mdpi.com/2571-6255/4/3/37

[94] Marks-Block and Tripp, "Facilitating Prescribed Fire," 1-2. 7

The *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*, defines prescribed burning as "the controlled application of fire to a defined vegetated area to maintain or modify a system to meet a predetermined objective or objectives."[95] During the 1950s and 1970s, prescribed burning gained the interest of Western scientific research and land management practitioners. While private landowners (such as ranchers) were fondly conducting prescribed burns to some extent, the US Forest Service (USFS) (since it was established) successfully influenced popular public opinion and other federal and state agencies with the perception of fire as destructive and detrimental to the well-being of parks and forests. However, through the unrelenting work of determined Native fire practitioners, knowledge of Indigenous fire or good fire was circulating across the agencies.[96] Though it found little acceptance earlier, with gradual research and experimental burns showing promising results, in the 1970s, the USFS changed its policy and instated prescribed burning as a management practice. Other agencies quickly followed suit. Since then, federal, state, and local agencies have implemented prescribed burning most often "to mitigate risks of damage from wildfires by reducing the amount of fuel available and modifying its structure. It is carried out at scales from meters to kilometers and utilized to protect a wide variety of assets including settlements, infrastructure, catchments, and recreation areas."[97]

In Fire Ecology, this shift is partly attributed to Harold lll, whose "ideas became even more relevant as urban development thrust its way into wildland ecosystems."[98] Biswell is referred to as a "modern-day pioneer in fire ecology" for "his teaching and training activities in fire ecology, particularly in Southern California's San Diego County during the 1970s and 80s."[99] At times Biswell is noted as the father of ecology in California, and the opening credits of a video archive titled the *Legacy of Harold Biswell: Prescribed Fire Mitigation in SoCal* reads as follows: "The following field-day workshop was recorded in May 1983 […] in San Diego County to illustrate Harold Biswell's methodology of reintroducing

---

[95] Manzello, *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires,* 852.

[96] Irene Vasquez, "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use," Master's Thesis (Humboldt State University,2019) 41-42.

[97] Manzello, *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires,* 853.

[98] Jan W. van Wagtendonk, "Dr. Biswell's influence on the development of prescribed burning in California" (U.S. Department of Agriculture,1995), 11. In Weise, David R.; Martin, Robert E., *Biswell symposium: fire issues and solutions in urban interface and wildland ecosystems, February 15-17, 1994; Walnut Creek, California.* (Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture, 1995), 11-16.

[99] David R. Weise and Robert E. Martin, *The Biswell symposium: fire issues and solutions in urban interface and wildland ecosystems, February 15-17, 1994; Walnut Creek, California.* (Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture, 1995): 163, https://www.fs.usda.gov/treesearch/pubs/download/27399.pdf

prescribed (controlled) fire to our wildland ecologies."[100] Biswell's "legacy" is annotated to point to Indigenous fire practices: "Biswell's emphasis on fire's utility as a natural component of wildland ecology is accompanied by the history of Native [people's] beneficial use of prescribed fire."[101] It should be acknowledged that Biswell's *legacy* is derived from Indigenous knowledges.

It is important to note that while Indigenous fire practices (cultural burnings) are part of a larger context of reciprocity in Native stewardship (hence, must be practiced by Native people), prescribed fires' role in the settler agencies is most commonly tied to wildfire mitigation. Over the years, federal and state agencies have worked with Native fire practitioners to grow the practice of prescribed burning within the agencies. However, the pace and expanse of prescribed burning is limited and consistently falls below the target numbers. In the past, some agencies attributed this to budget and labor constraints. While the budget for wildfire mitigation is increasing, the common concern over labor is that as the fire season stretches over more of the year, firefighters are tied up in putting out wildfires instead of investing time in prescribed burns. In 2020, teams of firefighters were brought into California from at least ten states within the US, and internationally from Canada, Australia, New Zealand, and Israel/Palestine. Changes via budget increases and additional firefighters do little to alleviate the underlying causes of combustions, as the uneven development inherent in capitalism continues to survive "in large part through the production of space."[102] As N. Smith, insists, "It is not just that capitalism fails to develop evenly, that due to accidental and random factors the geographical development of capitalism represents some stochastic deviation from a generally even process. The uneven development of capitalism is structural rather than statistical."[103]

[100] Fire Science Consortium, JFSP Fire Science Exchange Network, "Legacy of Harold Biswell: Prescribed Fire Mitigation in SoCal" (Archive video), May 1983, http://www.cafiresci.org/research-publications-source/category/biswelllegacy

[101] Fire Science Consortium, JFSP Fire Science Exchange Network, "Legacy of Harold Biswell: Prescribed Fire Mitigation in SoCal."

[102] Foreword by David Harvey, in Smith, *Uneven Development*, vii.

[103] Smith, *Uneven Development*, 4.

Not knowing what else to do

*Anthropologists such as Thomas Talbot Waterman, Alfred Kroeber, and Theodora Kroeber notoriously claimed documentation of the "last wild man" or "last wild In****:"[1] a Yahi person of the subdivision of Yana, (whom they) presumed to be the last to live in the wild. A person who refused to give their name was given the name Ishi by A. Kroeber. By 1911, Ishi had been placed in a museum, studied, and photographed.*

Writer Gerald Vizenor (Anishinabe heritage and an enrolled member of the Minnesota Chippewa Tribe, White Earth Reservation) reflected on Ishi: "Ishi was not his native name; he was rescued by cultural anthropologists and named by chance, not by vision. The spirit of this native hunter, captured almost a century ago, has been sustained as cultural property. Ishi was humanely secured in a museum at a time when other natives were denied human and civil rights on reservations."[2]

Vizenor shared further: "Ishi, Albert Camus, and Eric Hoffer, influenced the early development of my thoughts as a writer."[3] "Ishi, more than any other native outside of my family, is a presence in my creative memory. I admire his courage, humor, patience, the irony of his service in a museum, and his sense of survivance. He is my virtual, visionary relation, an honorable elder of native memory."[4]

[1] Theodora Kroeber, *Ishi in Two Worlds. A biography of the last wild I***** in North America* (University of California Press, 1961); Theodora Kroeber, *Ishi. The Last of His Tribe* (Parnassus Press, 1964).

[2] Gerald Vizenor, *Native Liberty: Natural Reason and Cultural Survivance* (University of Nebraska Press, 2009), 26.

[3] Vizenor, *Native Liberty*, 29.

[4] Vizenor, 28.

Chapter 2.
California Dreaming. Perverse Ideologies and Defensible Spaces.

Ishi was discovered weak and starving in August 1911 in the corral of a slaughter house in Oroville, California. Not knowing what else to do… the county sheriff decided to put him in jail.[1]

The threat of wildfires to life and property

In the previous chapters, *wild* is understood as colonizers and settlers' production of myths and ideologies. *Wild* is embedded in colonial and capitalist approaches that dictate the reconfigurations of land and people. Including but not limited to articulating "use" and "unused land" to unpeople places, commodifying land and people, and dispossessing Indigenous people from their homelands.[2] In California, military and carceral logics uphold and perpetuate oppression via ongoing political-economic makings such as surpluses[3]—making vulnerable people and places into the twenty-first century. Chapter two continues with the premise that California's formation is intimately bound to mythmaking, focusing on surveilling space and controlling the movement of people. From the prevalence of anticrime rhetoric to arguments for the conservation and preservation of environments to make exclusive neighborhoods, there is a utilization and borrowing of techniques, or perhaps a spilling of techniques into different realms.

---

[1] Elvira Pulitano, "Waiting for Ishi: Gerald Vizenor's Ishi and the Wood Ducks and Samuel Beckett's Waiting for Godot." *Studies in American Indian Literatures* 9, no. 1 (1997): 77. http://www.jstor.org/stable/20739386.

"Ishi was not a criminal, but he was detained because no one could understand his native language." Vizenor, *Native Liberty,* 25.

[2] In settling California and enslaving Africans brought to *California* via Southern US.

[3] Ruth Wilson Gilmore, *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California*, (University of California Press, 2006), 26-27.

Bringing attention to the approaches and terminology used in the military, urban space, architecture, and wildfires makes particular dynamics and forces at play visible. There are similarities in making neighborhoods exclusive, developing in Very High Fire Hazard Severity Zones (VHFHSZ), wildfire mitigation techniques, and Department of Defense (DoD) adaptation to the climate. Examining these helps to understand how and why places are the way they are and, significantly, what is centered, who is centered, and who and what is privileged.

In the following passages, I highlight select land use management and planning practices in California centering on *defense* as the dominant strategy for the *threat of wildfires*. Terms including but not limited to "home hardening," "defensible space," and "pre-attack plans or WUI tactical maps" are well established and partially familiar to the Californian public at large. Not only is the vocabulary reminiscent of militarized strategies, but it is also rooted in them. I briefly trace the militarized approaches within the realm of *wildfires*, not excluding the view of *wildfires* as a *threat* to life and property and, hence, must be *attacked*. Terminology such as "home hardening" and "defensible space" are not new in socio-spatial planning in the US. Instead, these are somewhat repeated and readapted in the social-spatial environment time and time again. Some of it was commonplace in the "slow growth movement," which Mike Davis observed, studied, and captured in the *City of Quartz*: Affluent homeowners in Southern California rallying with homeowner associations against multifamily housing developments to maintain exclusive neighborhoods, with a preference for securitized and surveilled streets protected from those Othered via race and class—hardening neighborhoods against the *criminalized other*.

Defense is a strategy used against both the *criminalized other* and *wildfires*. The concept and manifestations of defensible space, as they relate to wildfires, are limited in their function of *protecting property and life*. Looking at them closely, one can understand that the magnitude of the *problem of wildfires* is not appropriately addressed to transform the conditions, leaving people and places vulnerable. It brings together working-class populations made vulnerable by the political-economic reorganizations of land use, and the socio-environmental impacts of *wildfires* based on intrusive extraction of resources and expansion of private, state, and federal lands, including those held up by the U.S. Department of Defense. Defensible space also brings into relation the swelling parameters of criminalization and crime prevention reflected across planning and design—*hardened homes, neighborhoods, and spaces of detention and containment*. Defensible space is described in a few ways depending on the context. With *wildfires,* defensible space is a mitigation strategy, among others, such as prescribed burning and home hardening, to reduce the risk of home ignition in the event of a fire. "Defensible space is the buffer between a building on [the]

property and the grass, trees, shrubs, or any wildland area that surround[s] it."[4] It impedes or decelerates the wildfire and protects "against the threat of flying embers, direct flame contact, and radiant heat exposure."[5] It is further described as creating a "safe area" for firefighters to "defend [the] property."[6] Wildfire mitigation in California takes several forms and occurs at different levels and under varying jurisdictions, for instance, in parks and forests, urban planning, communities, and private homes. The bureaucratic formations are based on the infamous checkerboard patterns common across California, which are produced by complex ownership of parceled lands. *Wildfire* protection reflects these ownership patterns and becomes distributed into three responsibility areas: Local Responsibility Area, State Responsibility Area, and Federal Responsibility Area.[7] *Wildfire* protection reflects these ownership patterns and becomes distributed into three responsibility areas: Local Responsibility Area, State Responsibility Area, and Federal Responsibility Area.

The four dominant Federal Land Management Agencies are part of two federal departments. The US Forest Service (USFS) is within the Department of Agriculture, and the National Park Service, Bureau of Land Management, and U.S. Fish and Wildlife Service are within the Department of Interior. A third federal department that features quite often in the realm of wildfires is the Department of Defense. From 1872, the U.S. Army took to *patrol and protect* the early national park lands before the National Park Service (NPS) *controlled* and *managed* fire on its lands.[8] Surveilling and suppressing fires on the park grounds. National parks in the West were under the protection of the Army until the early twentieth century (1916), and "the combat model of firefighting was firmly established.[9] Even with the emergence of the US Forest Service in 1905, this model "would remain a powerful influence in the national park system for the next three generations."[10] The establishment of the USFS was considered "an alternative" to the

[4] "Defensible Space," California Department of Forestry and Fire Protection (Cal Fire), https://readyforwildfire.org/prepare-for-wildfire/defensible-space/.

[5] "Fire Hazard Severity Zones," Office of the State Fire Marshal, California Department of Forestry and Fire Protection (Cal Fire), https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones.

[6] "Defensible Space," California Department of Forestry and Fire Protection (Cal Fire).

[7] California State Responsibility Areas, California Open Data Portal, California Department of Forestry and Fire Protection (Cal Fire), https://data.ca.gov/dataset/california-state-responsibility-areas. California Wildfire Public Policy: Mapping the Wildfire Hazard," Insurance Institute for Business & Home Safety, https://ibhs.org/wp-content/uploads/member_docs/IBHS_Wildfire-Mapping-and-Building-Codes_2021.pdf.

[8] "1872-1916: The Military Era," In Hal K. Rothman, *A Test of Adversity and Strength: Wildland Fire in the National Park System* (National Park Service, 2006), 15.

[9] Rothman, *A Test of Adversity and Strength*, 22.

[10] Rothman, 22.

military, "ready to shoulder the enormous burden of fire fighting in the West."[11] While it was a separate agency, the military-style management focused on fire suppression continued. With each large fire, the USFS seemed to escalate its militarized tactics. For instance, following the "catastrophic blazes" of 1910, the USFS "'declared war' on forest fires and launched an aggressive campaign of fire prevention and control."[12]

In1914, the Department of War discontinued its fiscal support of national parks with the impending war in Europe. At the same time, compounded with the objectification and aesthetic of the *wild* nature, national parks were considered "reflections of the essence of American nationalism."[13] This vision catalyzed The Act to Establish the National Park Service, signed in 1916.[14] The National Park Service's (NPS) mission, repeatedly being distinguished from other agencies, was to: "protect nature;" "to preserve for the future while accommodating the present;" "'preserve and make available for public enjoyment;'" "preserve as well as use."[15] The NPS saw its "role as the preserver of American heritage" and "vignettes of primitive America" with a "vision of itself as keeper of American sacred spaces."[16] In 1978, the NPS listed and highlighted its role as managing resources on park lands.[17] Later, adjusted slightly to "*natural* [emphasis mine] resource management."[18] The Congressional Research Service Report IF10585S from 2021 noted that "NPS has a dual mission—to preserve unique resources and to provide for their enjoyment by the public. …The tension between providing recreation and preserving resources has produced many management challenges for NPS."[19]

Like the FS, even though the NPS was set up in a different department as a distinct agency, NPS would emulate the militarized approach to fire until the 1960s. Hal Rothman, author of *A Test of Adversity and Strength,* reflects on the types of management challenges for NPS, including its internal management structure (decentralized and centralized during different periods) and the mounting political

[11] Rothman, 122, 28.

[12] "Wildland Fires: A Historical Perspective" *U.S. Fire Administration Topical Fire Research Series*, Volume 1, Issue 3 (October 2000, Rev. December 2001):10. https://apps.usfa.fema.gov/downloads/pdf/statistics/v1i3-508.pdf

[13] Rothman, *A Test of Adversity and Strength*, 31.

[14] Compiled by Edward E. Hill and Revised by Renée M. Jaussaud, *Inventory of the Records of the National Park Service Record Group 79,* (Park History Program, National Park Service and Organization of American Historians, 2007), 11, https://www.nps.gov/aboutus/foia/upload/npsrg79_inventory-5.pdf

[15] Rothman, 186, 215, 232, 233.

[16] Rothman, *A Test of Adversity and Strength*, iii, 55, 183.

[17] Rothman, 155.

[18] Rothman, 94.

[19] Rothman, 80.

and public pressures as it attempted to move away from the F.S.'s practice of aggressive fire suppression by introducing prescribed fire to the management of national parks. In tracing the history, Rothman refers to public opinion, public reaction, and the need for public education and notes that the NPS introduced a public review of its proposals. Rothman shows that there was a focus on public expectations but despite NPS's efforts to educate the public and clear misinformation about prescribed fire, it fell short.[20] Most of the public (and many within NPS and FS, as well as politicians across the US) considered the presence of fire and smoke as *unnatural and destructive to nature and resources*. Within the NPS's (and FS's) history of investing in public education, first as a method of fire prevention and later fire as a tool for management, a point caught my attention in the 2001 *Review and Update*. It "adds a specific policy on communication and education to ensure that the 2001 Federal Fire Policy is well understood inside the fire management agencies and by the public."[21] It is notable because as acknowledged in the 1995 plan, which is still relevant today, "For many, fire remains a fearsome, destructive force that can and should be controlled at all costs. Smokey Bear's simple, time-honored 'only you' fire prevention message has been so successful that any complex talk about the healthy, natural role of fire gets lost, ignored or denied by broad internal and external audiences."[22] Even though the NPS brought prescribed fire, as acceptable, into the public realm in the 1960s, the document reflects on the lack of "discussions among managers and the public."[23] Furthermore, it points out: "[f]ew understand that integrating fire into land management is not a one-time, immediate fix but a continual, long-term process."[24]

Similar to the FS, NPS realized in the 1920s that for *fire fighting* they needed the nearby national forest managers to cooperate with them. It is what the FS encouraged (on paper). "Interagency cooperation" featured prominently in fire suppression efforts and was stressed in proposed plans and structures.[25] With a series of wildfire-related losses of life and property leading up to 1995, once again at the federal level, goals including *interagency cooperation* and *standardization* of wildfire strategies across the nation were expressed. This time with the 1995

[20] Rothman, 83, 147.

[21] The Interagency Federal Wildland Fire Policy Review Working Group, "Review and Update of the 1995 Federal Wildland Fire Management Policy," 2001, iv. https://www.nifc.gov/sites/default/files/policies/FederalWildlandFireManagementPolicy.pdf

[22] National Park Service, US Department of the Interior and US Department of Agriculture, "Federal Wildland Fire Management Policy & Program Review," 1995, 12. http://www.npshistory.com/publications/fire/fed-wildland-fire-mgt-policy-draft-1995.pdf

[23] National Park Service, USDI, USDA, "Federal Wildland Fire Management Policy & Program Review," 12.

[24] National Park Service, USDI, USDA, 12.

[25] Rothman, *A Test of Adversity and Strength*, 31.

Federal Wildland Fire Policy and Program Review.[26] Agencies in the Department of the Interior (DOI) and Department of Agriculture (USDA) updated the document several times since the initial collaborative document of 1995 in 2001, 2009, 2014, 2015, and 2022. Each time, the *interagency cooperation* goal reappears as a proposal and strategy for wildfire planning. The *Review and Update* of 2001 notes the value of expanding the work of wildfire management into extensive alliances with federal agencies including the Department of Defense and Department of Energy and those with subsidiary capacities—National Weather Service, Environmental Protection Agency, U.S. Geological Survey, Federal Emergency Management Agency.[27] The 2017 plan states that it is the "policy of DOI to provide an integrated, intergovernmental approach to the management of wildland fires for fire managers, subordinate leaders, and fire fighter."[28] Each plan calls for "integration, coordination, and oversight of wildland fire policy across" agencies.[29] Each claim to understand that "[j]ust as wildfires know no boundaries, planning, projects, and collaborative work to address them must, with mutual agreement, cross ownership lines and jurisdictional boundaries to be effective."[30] These plans prioritize proliferating the resourcefulness of the *Nation's forests and grasslands* with hopes of boosting *resilience*.[31] *Protecting life, property, and resources.*[32] Leaving interagency cooperation goals unmet or sidelined repeatedly.

---

[26] National Park Service, USDI, USDA.

[27] The Interagency Federal Wildland Fire Policy Review Working Group, "Review and Update of the 1995 Federal Wildland Fire Management Policy," 2001. https://www.nifc.gov/sites/default/files/policies/FederalWildlandFireManagementPolicy.pdf

Additionally: National Interagency Fire Center, https://www.nifc.gov/about-us/our-partners

Listed in the working group:

US Department of the Interior: Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, Bureau of In**** Affairs, Geological Survey, Bureau of Reclamation; US Department of Agriculture: US Forest Service; Department of Energy; Department of Defense; Department of Commerce: National Oceanic And Atmospheric Administration/National Weather Service; U.S. Environmental Protection Agency; Federal Emergency Management Agency; National Association of State Foresters.

[28] Office of Wildland Fire "Department of the Interior, Departmental Manual," "Chapter 1: Policy and Program Management, Public Lands, Wildland Fire Management," 2017, 1. https://www.doi.gov/sites/doi.gov/files/elips/documents/620-dm-1.pdf

[29] The Interagency Federal Wildland Fire Policy Review Working Group, "Review and Update of the 1995 Federal Wildland Fire Management Policy."

[30] Rangeland Fire Task Force (Task Force), Department of the Interior "An Integrated Rangeland Fire Management Strategy," May 2015, 7. https://www.forestsandrangelands.gov/documents/rangeland/IntegratedRangelandFireManagementStrategy_FinalReportMay2015.pdf

[31] The Interagency Federal Wildland Fire Policy Review Working Group, 44.

[32] The Interagency Federal Wildland Fire Policy Review Working Group, 44.

Fire Hazard Severity Zones

While USDA's Forest Service and the Department of the Interior's Bureau of I***** Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service are the federal agencies responsible for wildfire protection and management at the state level, the California Department of Forestry and Fire Protection (CalFIRE) is in charge of fire protection in State Responsibility Areas– and private and public forests within the state as well. CalFIRE was established as a state agency over time after a series of configurations and reconfigurations took place within and across federal and state departments. Under the Governor's Reorganization Plan No. 3 (1995), the Office of State Fire Marshal (OSFM) formed in 1923 was brought into the structure of CalFIRE. The consolidation, it was claimed, was a "to protect life and property through the development and application of fire prevention engineering, education and enforcement."[33]

The SRAs of California amount to 31 million acres.[34] The criteria used to determine what falls under its authority and how they are arranged are "land ownership, population density and land use."[35] The Board of Forestry holds the power to categorize state lands for which it is fiscally responsible, as stated within the California Codes Public Resources Code Section 4125.[36] SRAs are reviewed every five years while being updated every year to account for modifications and adjustments that do not need to be authorized by the board.[37] An example of the tasks at the state level is the outlining of Fire Hazard Severity Zones (FHSZ). The Public Resources Code Section 4201-4204 was updated to require the OSFM, instead of the CalFIRE Director, to determine fire hazard severity zones and allot each zone with a hazard rating. The responsibility includes zone reinspection and reassessments.[38] In 2007, CalFIRE shared FHSZ maps with data considering

---

[33] Office of State Fire Marshal, "History," https://osfm.fire.ca.gov/about-us/osfm-history/ Updated description and web page: "The Office of the State Fire Marshal (OSFM) is the CAL FIRE program that protects life and property through the development and application of fire prevention, engineering, training and education, and enforcement." Office of State Fire Marshal, https://osfm.fire.ca.gov/.

[34] "Partnering Agencies," https://www.readyforwildfire.org/more/cal-fire-partners/. Updated web page: https://readyforwildfire.org/cal-fire-partners/.

[35] "State Responsibility Areas," California Department of Forestry and Fire Protection, https://gis.data.ca.gov/datasets/CALFIRE-Forestry::state-responsibility-areas/about.

[36] "California Codes Public Resources Code Section 4125-4137," https://www.atcfire.org/files/c1ba28451/CALIFORNIA_CODES_4125.pdf

[37] "State Responsibility Areas," California Department of Forestry and Fire Protection, https://gis.data.ca.gov/datasets/CALFIRE-Forestry::state-responsibility-areas/about.

[38] Nelson Byner, "Building Codes and Standards for New Construction," In Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires, edited by Samuel L. Manzello (Springer, 2020): 55-56, https://doi.org/10.1007/978-3-319-51727-8_69-1

aspects like "fuels, terrain, and weather."[39] These maps were used to establish statewide WUI fire requirements through codes and regulations. In the California Building Code, the set hazard rating is the basis for material specifications and design requirements, for instance, for structures in the high hazard zones.[40] In 2022, CalFIRE used a new model to update the zones, considering elements such as fire history, wind event data, and a detailed model.[41] While SRAs considered hazard zones and mitigation strategies since the 1980s, it was not until after the Oakland Hills Fire (1991) that Assembly Bill AB 337 (Government Code Section 51175) extended these to Local Responsibility Areas (LRAs) in 1992.[42] SRAs work with LRAs to draft and develop outlines for Very High Fire Hazard Severity Zones within the LRAs. However, it should be noted that LRAs are not obliged to report to CAL Fire or integrate its recommendations if the LRA has similar or narrower ordinances.[43]

In Riverside County, fire protection has been the responsibility of a collaboration between CalFIRE and the Riverside County Fire Department since 1946. The two agencies coordinate administration for unincorporated areas of Riverside County and those designated as Partner Cities.[44] While reading the county's fire related

---

[39] "Environment/Fire_Severity_Zones," https://services.gis.ca.gov/arcgis/rest/services/Environment/Fire_Severity_Zones/MapServer#:~:text=Description%3A%20Public%20Resources%20Code%204201,fuels%2C%20terrain%2C%20and%20weather. Update: FHSZ in State Responsibility Area effective April 1, 2024. https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/ ; https://calfire-forestry.maps.arcgis.com/home/item.html?id=ac8ed44d76ed4988bceb07d35d80f4cb#overview.

[40] "Chapter 7A [SFM] Materials and Construction Methods for Exterior Wildfire Exposure," In 2022 California Administrative Code, California Building Code, Title 24, Part 2 (Volumes 1 & 2), (International Code Council, 2022), Effective dates January 1, 2023. https://www.library.ca.gov/law/building-standards/

[41] Office of the State Fire Marshal, Cal Fire, "Fire Hazard Severity Zone Methods," https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-map/short_fhsz_methods_042324.pdf?rev=8fc7f1245bbb4bab9e3afe42c25673a8&hash=6E5E3014AE4428F60FDB72CA86E0ABAB

[42] Heather Anu Kramer, Miranda H. Mockrin, Patricia M. Alexandre, and Volker C. Radeloff, "High wildfire damage in interface communities in California," *International Journal of Wildland Fire*, 28, (2019): 645, https://doi.org/10.1071/WF18108

[43] Office of the State Fire Marshal, Cal Fire, "LRA Fire Hazard Severity Zone Maps," https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps

[44] Riverside County Fire, "History," https://www.rvcfire.org/about-us/history; Riverside County Fire, "Riverside County Fire Department Service Area," https://www.rvcfire.org/about-us/service-area

documents, I found traces hearkening back to collaborations between the military and other state/federal agencies for fire protection. In this particular LRA, "Riverside County Fire Department's first 'engines' were surplus Army vehicles," and "ten-wheelers stayed in the fleet until about 1970."[45] Another remnant is the use of terms such as "Battalion," which seems akin to a *local chapter,* and "Battalion Chiefs."[46] Contemporary infrastructural support for county agencies comes from NGOs such as Fire Safe Councils.[47] One of the many examples of an NGO with an integrated organizational structure is located in Northern California: The Santa Clara County FireSafe Council (SCCFSC), established in 2002.[48] The council is invested in an expansive scope of *wildfire preparation or preparedness* and brings together "multijurisdictional agencies, organizations, and residents."[49] The publicly available document, "Santa Clara County Community Wildfire Protection Plan (CWPP)," describes that "This larger scale of planning increases the level of coordination and cooperation among stakeholders, which can lead to broader and more efficient wildfire risk mitigation measures."[50] In an effort to expand and enforce wildfire mitigation strategies, the CWPP supported the Safety Element of the Santa Clara County General Plan.[51] The Safety Element requires counties and cities to prepare these as part of the General Plan (*which is likened to a constitution*).[52] In an e-mail penned by the Department of Planning & Development Safety Element Team of the County of Santa Clara,[53] the Safety Element is briefly explained:

Partner Cities: Banning, Eastville, Norco, Beaumont, Coachella, La Quinta, Desert Hot Springs, Indio, Moreno Valley, Jurupa Valley, Lake Elsinore, Perris, Palm Desert, Rancho Mirage, Rubidoux, San Jacinto, Indian Wells, Temecula, Wildomar, Menifee.

[45] Riverside County Fire, "History," https://www.rvcfire.org/about-us/history

[46] Riverside County Fire, "Locate Fire Stations, Filter by Battalion or City," https://www.rvcfire.org/resources/fire-stations

[47] California Fire Safe Council (CFSC), https://cafiresafecouncil.org/ https://cafiresafecouncil.org/impact/

[48] Santa Clara County Firesafe Council (SCFSC), "Santa Clara County Community Wildfire Protection Plan," August 2023, https://santa-clara-cwpp-sccfc.hub.arcgis.com/ and https://sccfc.maps.arcgis.com/sharing/rest/content/items/59c5a1772e3849ad8f225e8f638431d1/data.

[49] SWCA Environmental Consultants, "Santa Clara County Community Wildfire Protection Plan," Draft, June 1, 2016, https://www.sccfd.org/wp-content/uploads/2014/08/SantaClaraCWPP_Draft_FrontMatter-TOC.pdf

[50] SCFSC, "Santa Clara County Community Wildfire Protection Plan," 6.

[51] SCFSC, 6.

[52] California Code, Government Code - GOV § 65302

[53] The Department of Planning & Development Safety Element Team, "County of Santa Clara Safety Element Update," 28 October, 2022, https://www.rcdsantaclara.org/files/103a40701/4.8_SEU%3A+County+of+Santa+Clara+Safety+Element+Update%3A+INVITATION+FOR+THE+1ST+STAKEHOLDER+MEETING%2C+November+10.pdf

> "The Safety Element is a mandatory element of the General Plan that primarily addresses the various natural and human-caused hazards affecting the unincorporated areas in Santa Clara County. This includes, but is not limited to, seismic and geologic hazards (earthquakes, landslides, liquefaction), flooding (including dam failure), wildland and urban fires (including evacuation assessments), hazardous materials, emergency management, and climate adaptation."

The 2023 Santa Clara CWPP[54] located the areas needing *wildfire mitigation* and proposed how to lessen the risk "from within the community."[55] The proposal entails centering "a framework for reducing and managing vegetative fuel loads on privately owned open spaces/undeveloped land and adjacent roads to minimize wildfire hazard while avoiding or minimizing negative environmental effects."[56] The plan laid out the policies, laws, ordinances, codes, plans, and programs in place at the federal, state, and county levels.[57] FireSafe Councils can be distinct in their focus depending on the region and socio-economic configuration, but they tend to incorporate prescribed burning as a tool for wildfire prevention. However, the California Fire Safe Council's mission is "wildfire risk reduction and resiliency," based on the *threat of wildfires to life and property*.[58] The model of FSCs does not seriously consider the fact of the ongoing occupation of Indigenous homelands, access for Native people and communities, or land back, nor does it consider the impacts of racialized and economic systems. The function and solutions of the FSCs and agencies networked within the FRAs, SRAs, and LRAs are an accurate example of what N. Smith observed in response to a social crisis: attention is given to the production process, not the social structure.[59]

With the subject line "County of Santa Clara Safety Element Update: INVITATION FOR THE 1ST STAKEHOLDER MEETING, November 10."

[54] SCFSC, "Santa Clara County Community Wildfire Protection Plan," vii.

Development of the CWPP is rooted in facilitated collaboration among local, state, and federal officials, as well as non-governmental stakeholders and private citizens.

[55] SCFSC, 53.

[56] SCFSC.

[57] SWCA, "Santa Clara County Community Wildfire Protection Plan."

[58] California Fire Safe Council (CFSC), https://cafiresafecouncil.org/ https://cafiresafecouncil.org/about-us/about/ https://cafiresafecouncil.org/resources/fire-safe-councils/start-a-new-fire-safe-council/ https://www.edcfiresafe.org/wp-content/uploads/2023/09/STARTING-A-FIRE-SAFE-COUNCIL-12-2-15.pdf

[59] Smith, *Uneven Development*, 84.

Defensible space and home hardening

A significant part of the current strategies for preparing and protecting homes against *wildfires* comes from Jack Cohen's building-destruction research at the Fire Sciences Laboratory in the Forest Service's Rocky Mountain Research Station in the 1990s.[60] His research centers on home ignitability, which he describes as the likelihood of a home catching fire during a wildfire or other type of outdoor fire, based on attributes of the design and materials of a structure and nearby combustibles.[61] Cohen concluded that if the home and space around it could be enhanced against catching fire, damage and losses would be lowered.[62] He writes:

> Research shows that a home's ignition potential during extreme wildfires is determined by the characteristics of its exterior materials and design and their response to burning objects within one hundred feet (thirty meters) and firebrands (burning embers). … This area—a home and its immediate surroundings— is called the home ignition zone. Thus, given an extreme wildfire, the home ignition zone principally determines the potential for a WUI fire disaster.[63]

Insisting that the home loss from wildfires in the WUI should be seen differently—as "a home ignitability issue largely independent of wildland fuel management issues," Cohen proposes directing attention to the home ignition zones (HIZ).[64] Essentially, proposing the homes as the center of the *wildfire crisis* and fireproofing as the solution—regardless of how the forests are treated. (Again, I am thinking about what N. Smith observed in response to a social crisis.) Building material and fire safety codes, ordinances, regulations, and standards continue being introduced and adapted statewide and locally based on Cohen's research on home ignitability. These are part of the mitigation techniques used for home hardening, which are encouraged by fire agencies. CalFIRE notes that home hardening can positively impact how a home fares during a wildfire, along with the defensible space. A Legislative Analyst's Office (LAO 2021) report from September 2021 titled "Reducing the Destructiveness of Wildfires: Promoting Defensible Space in California" cites Cohen et al. when stating that there are two

---

[60] Jack Cohen, "Reducing the Wildland Fire Threat to Homes: Where and How Much?" In: Gonzales-Caban, Armando; Omi, Philip N., *Proceedings of the Symposium on Fire Economics, Planning, and Policy: Bottom Lines; 1999 April 5-9. San Diego, CA.* U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station (1999). https://www.fs.usda.gov/psw/publications/documents/psw_gtr173/psw_gtr173_04_cohen.pdf

[61] Cohen, "Reducing the Wildland Fire Threat to Homes," 192.

[62] Cohen, 190.

[63] Jack Cohen, "The wildland-urban interface fire problem: A consequence of the fire exclusion paradigm," *Forest History Today*. Fall: 20-26 (2008): 23, https://foresthistory.org/wp-content/uploads/2016/12/Cohen_wildland-urban-interface-fire-problem.pdf

[64] Cohen, "Reducing the Wildland Fire Threat to Homes," 192.

ways to lessen home losses to wildfires: one is to diminish exposure to wildfires (defensible space), and the other is to lower the structure's potential inflammability (home hardening).[65] The report notes that historically, the former has been implemented as a primary approach and proposes that "reducing home ignitability through defensible space is a key to mitigating wildfire disasters" and warrants more attention.[66] Defensible space previously entailed two zones and an additional zone was added on. Zone 1 is between 5 and 30 feet with regulations for horizontal and vertical vegetation; Zone 2 is the surrounding area between 30 and 100 feet from the property. In 2020, an assembly bill brought about Zone 0, which marks five feet as the "ember-resistant zone"—the home ignition zone—specifically within the borders of the SRA and places outlined as Very High Fire Hazard Severity Zones (VHFHSZ).[67]

Cohen proposes another change of perspective, this time related to homeowners. He suggests private individuals, who are homeowners, are "an alternative" to fire agencies' responsibility for reducing home ignition.[68] Cohen pushes to reinforce the *self-sufficiency* of homeowners. In 1999, he repeatedly stated "Home ignitability, i.e., the potential for W-UI home fire loss, is the homeowner's choice and responsibility."[69] This was his take in 1999, and he remained steadfast until he retired from the U.S. Forest Service in 2016 (and it still holds). Along with his co-authors, in 2014, in an essay titled "How risk management can prevent future wildfire disasters in the wildland-urban interface," he reiterated:

> If our problem statement is defined as keeping wildfire out of the WUI, it is unobtainable, and large wildfires and residential disasters will continue, and likely increase. … By contrast, if the problem is identified as home ignition, mitigation of the HIZ is the most cost-effective investment for reducing home destruction, and this can be augmented with other investments…. The HIZ is independent of fire behavior in the nearby wildlands, meaning that proper care of the HIZ separates home losses from wildland fire behavior, regardless of the other elements of wildfire risk (fire behavior and its likelihood). Therefore, the scope of mitigation

---

[65] Gabriel Petek, Legislative Analyst's Office, "Reducing the Destructiveness of Wildfires: Promoting Defensible Space in California," September 2021, 3-4, https://lao.ca.gov/Publications/Report/4457

[66] Petek, "Reducing the Destructiveness of Wildfires," 3.

[67] Office of the Governor, "Assembly Bill No. 3074, Chapter 259," 29 September 2020, 92, https://bof.fire.ca.gov/media/10236/full-10-b-1-ab-3074-signing-message-and-chaptered-bill-language.pdf. "...the Legislature passed Chapter 259… (AB 3074, Friedman), which creates a third, 'ember-resistant zone' [Zone 0] within five feet of structures in SRAs and VHFHSZs"

[68] Cohen, "The wildland-urban interface fire problem," 24.

[69] Cohen, "Reducing the Wildland Fire Threat to Homes," 194.

> responsibility must be centered on homeowners. WUI fire disasters cannot be prevented without homeowners actively creating and maintaining HIZs.[70]

In the LAO 2021 report, Cohen's ideas feature prominently: The "*report focuses primarily on how state can support individual efforts.* The state does not bear the primary responsibility for defensible space. Instead, the creation and maintenance of defensible space around private properties is an owner responsibility."[71] However, the LAO report and a vast amount of prior research documentation suggest that one of the reasons private homeowners are not quick to implement these measures is due to a lack of awareness and sufficient understanding—at times, communities that were not previously categorized within FHSZs may find themselves within it—or difficulty navigating the abundance of policies, ordinances, regulations, and laws, and how to go about taking measures. While new home development in the WUIs must meet certain building and clearance requirements in California, there are gaps in how fully they are adapted and enforced at the federal, state, and local levels.

Moreover, certain aspects are not mandated and thus, for instance, leave room for developers or homeowners building in high-risk areas or homeowners in previously established neighborhoods, to forgo *optimum measures*. As wildfires grow in frequency, size, and intensity, state and local fire agencies and NGOs are invested in growing community awareness and educating homeowners. In one presentation from a webinar series in 2021 titled "Living with Fire in Marin County," A Marin County *Battalion Chief* and Wildfire Hazard Mitigation Specialist shared that "The fire department does have some ability to enforce defensible space codes. There are laws related to defensible space and the maintenance…but the law does not prescribe a perfect defensible space around homes."[72] Essentially, the laws do not address the elements and precision required for defensible space to be an effective mitigation technique. Other often cited reasons homeowners do not take home hardening measures are insufficient means of finances and time. Housing in WUI is not limited to wealthy neighborhoods. In a research study published in 2020 titled "Subsidized Households and Wildfire Hazards in California," the authors find that "while WUI

[70] David E. Calkin, Jack D. Cohen, Mark A. Finney, Matthew P. Thompson, "How risk management can prevent future wildfire disasters in the wildland-urban interface." *Scientific Journal*, Rocky Mountain Research Station. 111(2) (2014): 750, https://doi.org/10.1073/pnas.1315088111

[71] Petek, "Reducing the Destructiveness of Wildfires," 3.

[72] Todd Lando, "Living with Fire in Marin County: Busting Myths Around Creating Defensible Space," virtual lecture, posted on April 22, 2021 by Fire Safe Marin, YouTube, 20 min., 45sec., https://www.youtube.com/watch?v=a4JpOdS9ffI

neighborhoods tend to be more affluent than non-WUI neighborhoods, many low- and moderate-income households live in the WUI."[73]

> Across all housing types, the WUI disproportionately contains owner-occupied and detached housing. This is consistent with the image of low-density single-family housing located in and near wooded areas. But, some of the lowest cost housing is also more likely to be found in the WUI, including unsubsidized manufactured housing. Of all housing types, manufactured housing is most disproportionately located in the WUI.[74]

The authors write that in California, there is a coming together of the growing loss of homes to wildfire, housing accessibility being restricted due to affordability, and increased development of housing in the WUI.[75] The authors describe that these "famously collide" in California.[76] Or perhaps they are a part of the conjuncture Davis wrote about in the City of Quartz.

As stated above, besides the *wildfire crisis*, California, particularly Southern California, faces a chronic *affordable housing crisis*.[77] Part of it is reflected in the zoning regulations utilized by "some cities in a metropolitan region."[78] These might allow mainly "low-density single-family housing and high-end retail" while creating high tax yields[79] and skyrocketing real estate, forcing high-density housing to be raised in other locations. In other cities, allowing high-density developments could partially increase tax yields, and those with lower incomes are restricted to cities with multifamily housing.[80] "Establishing over time an uneven

---

[73] C.J. Gabbe, George Pierce, and Efren Oxlaj, "Subsidized Households and Wildfire Hazards in California." *Environmental Management 66*, (2020): 877. https://doi.org/10.1007/s00267-020-01340-2

[74] Gabbe, Pierce, and Oxlaj, "Subsidized Households and Wildfire Hazards in California," 877.

[75] Gabbe, Pierce, and Oxlaj, 875, 881.

[76] Gabbe, Pierce, and Oxlaj, "Subsidized Households and Wildfire Hazards in California," 881.

[77] The unhoused population in California in 2023 is 181,399.

U.S. Department of Housing and Urban Development, "The 2023 Annual Homeless Assessment Report to Congress," December 2023, Updated January 2024. https://shou.senate.ca.gov/sites/shou.senate.ca.gov/files/Homelessness%20in%20CA%202023%20Numbers%20-%201.2024.pdf

The U.S. Department of Housing and Urban Development, Office of Community Planning and Development, "The 2023 Annual Homelessness Assessment Report (AHAR to Congress) Part 1: Point-In-Time Estimates of Homelessness," December 2023, 16, https://www.huduser.gov/portal/sites/default/files/pdf/2023-AHAR-Part-1.pdf

[78] Ajay Garde and Qi Song, "Housing Affordability Crisis and Inequities of Land Use Change: Insights From Cities in the Southern California Region," *Journal of the American Planning Association*, 88:1 (2022): 68, DOI: 10.1080/01944363.2021.1911673

[79] Garde and Song, "Housing Affordability Crisis and Inequities of Land Use Change," 68.

[80] Garde and Song, 68.

pattern of land use portfolios of cities that do not equitably address the region's housing needs."[81] N. Smith's description of uneven development being inherently a part of capitalism is explicitly depicted here. Thinking about the emerging pattern together with the analysis on subsidized housing, while much of the subsidized housing sits outside WUIs, the "magnitude of the overlap between subsidized housing and the WUI justifies further research and policy action."[82] There is also a concern about "unsubsidized manufactured housing residents, who tend to be lower-resourced and more exposed to wildfire hazards."[83]

To support those living in the WUI with limited resources some counties are beginning to roll out the new state Home Hardening Program. In 2021, the California Governor's Office of Emergency Services (Cal OES) introduced financial support for low- and middle-income homeowners.[84] They announced the framework for a new initiative and forthcoming law. The Home Hardening Program provides Californians (with low- to middle-income) a chance to apply for financial assistance for home renovations with appropriate materials and developing defensible space along the home and neighborhood. The suggested home renovations are in line with Cohen's proposal, for instance, supplanting wooden roofs with fire-resistant materials such as "metal, clay, or tile, installing metal gutters, and upgrading to dual-paned windows with one pane of tempered glass."[85] Cohen's research brought attention to the house in the WUI, its design and construction, where it sits in relation to the *wildlands*, and how it burns. The research is significant for understanding the ways in which different types of fires move, the distance and speed at which they could spread, and how structures can ignite– " lying embers, direct flame contact, and radiant heat."[86] It also demonstrates that if one structure or home ignites via firebrands in a neighborhood, it quickly travels to the other structures or homes in proximity. With this knowledge, he co-founded the Firewise Program, currently overseen by the National Fire Protection Association (NFPA).[87] Described as a voluntary "grassroots, community-based wildfire preparedness program," in 2019 it rolled

[81] Garde and Song, 68.

[82] Gabbe, Pierce, and Oxlaj, "Subsidized Households and Wildfire Hazards in California," 881.

[83] Gabbe, Pierce, and Oxlaj, "Subsidized Households and Wildfire Hazards in California," 879.

[84] "California Wildfire Mitigation Program," Cal OES.

[85] Cal OES News, The California Governor's Office of Emergency Services (Cal OES), "California Sets Framework for Wildfire Home Hardening Program," Published 7 May, 2021, https://news.caloes.ca.gov/california-sets-framework-for-wildfire-home-hardening-program/

[86] Office of the State Fire Marshal, Cal Fire, "Fire Hazard Severity Zones," https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones

[87] National Fire Protection Association, "How to become a Firewise USA site," https://www.nfpa.org/education-and-research/wildfire/firewise-usa/become-a-firewise-usa-site

out a two-year pilot program to grow community participation in mitigation and resilience strategies.[88] Seven communities in the program were selected as "Sites of Excellence," focusing on the home ignition zone, clearing fuel, and supplanting combustible materials (mulch, roofs, etc.) with fire-resistant ones. It allows communities to determine which mitigation strategies to employ.[89] However, these may not be impactful in lowering the fire risk if the entire community does not collaborate. In a document assessing the seven selected communities, a community member reiterated that home hardening would not be adequate unless each home in the neighborhood took the necessary measures.[90] Especially in the suburbs, since 100 feet of distance between houses is not usual.[91]

The program places significance on the strength of communities with organizations such as homeowners' associations (HOAs) enabling "structure, leadership, and financial resources."[92] While all seven sites had HOAs, Firewise supports around 1900 communities, many of which do not have HOAs.[93] The program sees the benefit of HOAs in providing management and defining mitigation measures. Implementation can be overseen under their authority.[94] Ultimately, the program's success requires highly engaged community participation in addition to the qualification of owning a home. It further privatizes the *crisis*. In the Firewise assessment report, some Firewise communities suggested insurance discounts to incentivize homeowners to take home hardening measures. Relatedly, the LAO 2021 report indicates that insurance companies could take a role in "incentivizing defensible space compliance."[95] It explains that over the years, wildfire losses have overwhelmed insurance companies, resulting in premiums going up or policy renewals being rejected. With this, insurance encourages homeowners to take measures toward wildfire mitigation. Homeowners who abide could then receive a lower rate or the chance to renew their policies in the first place.[96] Once again, the problem of affordability arises. Once again, this approach demands community participation to achieve its goals effectively. It is clear that Cohen's proposal attempts to isolate the home from its surroundings—not just physically but also politically, socially, economically, and environmentally. I see this as *unobtainable*.

---

[88] Rebecca Miller, "Residents Reducing Wildfire Risks: Findings from the NFPA® Firewise® Sites of Excellence Pilot, 2019–2020, National Fire Protection Association (NFPA), 2022, 1, https://www.nfpa.org/education-and-research/wildfire/firewise-usa/firewise-sites-of-excellence

[89] Miller, "Residents Reducing Wildfire Risks," 6.

[90] Miller, "Residents Reducing Wildfire Risks, 24.

[91] Miller, "Residents Reducing Wildfire Risks, 3.

[92] Miller, "Residents Reducing Wildfire Risks, 24.

[93] Miller, "Residents Reducing Wildfire Risks, 3.

[94] Miller, "Residents Reducing Wildfire Risks, 26.

[95] Petek, "Reducing the Destructiveness of Wildfires," 27.

[96] Petek, 27.

There are inherent contradictions that some Firewise communities themselves identify. For instance, in one community, a Firewise leader linked protection from wildfires to the importance of protecting the environment for generations to come, urging the NFPA to highlight this point. This is primarily sidestepped in Cohen's ideas. Notably, when Cohen goes further to articulate the HIZ: "By definition, wildland-urban interface fire disasters depend on homes igniting during wildfires. If homes do not ignite and burn during wildfires ***then the WUI fire problem largely does not exist.***"[97] It has a ring of survivalism or a prepper mentality. Privatized and individualized. The problem with Cohen's description is manifold, as I suggested earlier. Still, principally, it lies in the idea that the home cannot become a bastion to retreat to, just as fragments are not separate and isolated but rather dismantled pieces. The understanding of how fire moves could instead become useful in considering space for cultural burning and prescribed burning within the fabric of the built environment. Without growing the work of relations between cultural burning and where and how we live, these practices continue to be limited in high-density areas because of fears of escaping fires or in places where it is permissible, insurance is unaffordable due to such fears.

The fortification of homes against fire recalls Davis's observation about the making of exclusive suburbs: "residential security in Los Angeles - whether in the fortified mansion or the average suburban bunker - depends upon the voracious consumption of private security services."[98] In addition to private policing, and as discussed in the earlier chapter, policing of forests, there are now private firefighters (available for the rich). Hiring private firefighters to protect homes is another way of privatizing *wildfire* mitigation strategies that have become popular amongst private homeowners who can afford it. However, private firefighters are not as conclusive a solution as they may seem at first glance. They still need to negotiate the parameters and techniques used for protecting areas with the local, state, and federal fire agencies, as well as other private homeowners in the vicinity. What the private firefighters do or do not affect the surroundings and other agencies. At times, private firefighters and home hardening may not be enough to protect a home against firebrands or *wildfires*.

Fear of crime and the criminalized other

Somewhat unexpectedly, in a section titled "Economics of WUI/Wildfire Prevention and Education," law enforcement is marked as a prevention method.[99] Policing

[97] Cohen, "The wildland-urban interface fire problem," 22.
[98] Davis, *City of Quartz*, 248.
[99] Manzello, *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*, 213.

National Forests. A method of fire prevention. In the same publication, "defensive actions" are described as actions homeowners in the WUI can take to safeguard their own life and property.[100] It proceeds to illustrate defensive actions as part and parcel of processes of transformation for "people to coexist with the hazardous environment in which they live."[101] I find another of Davis's observations fitting here. Specifically, "millions of Angelenos have become genuinely terrified of their environment. Paranoia about nature, of course, distracts attention from the obvious fact that Los Angeles has deliberately put itself in harm's way."[102] When thinking about contemporary *wildfires, it would* be fair to extend this characterization beyond Angelenos and Los Angeles to most southern, central, and northern Californians and California. However, broadening the understanding of the environment, the paranoia about crime was also politically manufactured. Some of the terminology used in wildfire mitigation—hardening homes and defensible space—is part of another homeowner-centric constellation. In the 1970s, as the environmental movement was gaining momentum in California, many groups—holding opposing ideologies or rather ideologies across the spectrum—cherry-picked and skewed arguments to their socio-political benefit while severely harming others. This was the 'slow growth movement' sprouting across affluent and middle-class suburbs in different ways, into which Davis offers valuable insight. He writes about the middle-class, primarily white urban flight into the suburbs. Tracing the emerging 'slow growth movement,' he notes:

> In the Valley, a so-called 'slow-growth movement' had suddenly coalesced out of the molecular agitation of hundreds of local homeowners' associations. Although many of the movement's concerns about declining environmental quality, traffic and density were entirely legitimate, 'slow growth' also had ugly racial and ethnic overtones of an Anglo gerontocracy selfishly defending its privileges against the job and housing needs of young Latino and Asian populations.[103]

Terms such as conservation and, later, preservation came to be instrumentalized in the movement. One telling characteristic of such neighborhoods is what the movement was primarily based on: *conserving* and *preserving* the model or pattern of low-density, single-family home enclaves with white demographics. Coupled with anticrime as a political issue, the exclusive neighborhoods feeling threatened by (the fabrication of) heightened crime gradually installed high levels of surveillance and policing. Shielded from the *criminalized other*—those living in multifamily and high-density housing. Securitizing "exclusive" residential areas was the suburban response to the perception of an unruly environment—*the fear of*

[100] Manzello, *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*, 213.
[101] Manzello, *Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*, 213.
[102] Davis, "Los Angeles After the Storm," 223.
[103] Davis, *City of Quartz*, vii-viii.

crime.[104] Not unlike the reactions to *the threat of wildfires.* Davis wrote about the hardening of neighborhoods against crime. He noted the novelty of the "comprehensive security effort" emerging from unifying urban design, architecture, and the "police apparatus" and its implications for the social-environmental construction.[105] "'Security' becomes a positional good defined by income access to private 'protective services' and membership in some hardened residential enclave or restricted suburb. ....'security' has less to do with personal safety than with the degree of personal insulation, in residential, work, consumption and travel environments, from 'unsavory' groups and individuals, even crowds in general."[106]

Theoretically, or conceptually, and in their actualization, the hardening of homes and neighborhoods against *crime* and *wildfires* have parallels—they attempt to isolate the home from the unruly environment for security and protection of life and property. Similarly, defensible space creates an added layer or barrier in attempts to deter and isolate. Each instance is exclusionary. In the following passages, I describe the concept of defensible space as a response to crime to show its operationalization in the home ignition zone against the *threat of wildfires*. In both contexts, in the process of realizing defensible space, private property becomes ossified. The mitigation measure of defensible space is used in the urban setting by the US government. Defensible space is embedded in design theory *to prevent crime*. I found in the US Department of Housing and Urban Development (HUD) that defensible space is "both a criminological concept and a proven strategy for enhancing our Nation's quality of urban life."[107] The theory of defensible space comes from Canadian architect and planner Oscar Newman, who studied the correlation between social behavior and the built environment in 1969 (commissioned by the U.S. Department of Justice). Newman's research was followed by a publication titled *Defensible Space: How to Design Against Crime* (1972). Newman's theory offered three principles: territoriality, surveillance, and image. The first suggested that design should give individual residents a feeling of ownership. Using public housing to demonstrate, he states that residents are detached from feeling responsible for public areas within the premises, opening it up for criminal activity.[108] The solution, he claims, is to create parcels of outdoor

[104] Davis, *City of Quartz*, 212.
[105] Davis, *City of Quartz*, 224.
[106] Davis, *City of Quartz*, 224.
[107] Oscar Newman, *Creating Defensible Space*, (U.S. Department of Housing and Urban Development Office of Policy Development and Research,1996), III.
In the foreword by the Assistant Secretary of the Office of Policy Development and Research (U.S. Department of Housing and Urban Development).
[108] Oscar Newman, *Creating Defensible Space*, 17.

spaces linked to the units for individuals to be responsible for—"limit[ing] the operating turf of the criminal element that may be living among the residents."[109]

High-rises were seen as particularly violent and crime-ridden at this moment, and Newman's early work is based on one such building—Pruitt-Igoe in St. Louis. At this point, the building was demolished. As a counterproposal, Newman suggested low-rise high-density housing. His second principle is reminiscent of Jane Jacob's idea of "eyes on the street," which calls for community residents to monitor their streets and is enabled by design strategies such as a clear line of sight.[110] Newman suggests self-surveillance and self-policing. He explains that the third principle is related to bettering the residential building's image. Newman claims it is important to give residents "an environment to live in that enhances their self-image and evokes pride, ...to allow them the opportunity to themselves improve their space so that their identity with it is reinforced."[111] Newman's work initiated the Crime Prevention Through Environmental Design (CPTED) movement. Perplexingly, the theory was widely circulated, fostering private securitized places that shaped the built environment, even though evidence that Newman's measures work to reduce crime was lacking. Two of the proposed principles were not based on sound research, which was acknowledged by professionals and practitioners in different fields time and time again. Still, the concepts continue to be the basis for urban design theory at HUD.

While defensible space did not actually work in its application, in part, the consequences were insulated and alienated people and places. What it also did was reinforce private property. Newman drew on the socio-political climate of the Cold War, during which, pitted against communism, there was a significant drive to espouse private property.[112] The use of military technologies and techniques thickened the synthesis of architecture and urban design with socio-political-economic trepidations of the Cold War era.[113] Newman molded a vision for cities tied to crime deterrence from the contemporary sentiment in such a way that defensible space "was marketed as a response to fear of urban crime."[114] Architect Joy Knoblauch describes it as a "masterful response to the public and government audiences of his time." Knoblauch notes that Newman's theory of defensible space was embraced because it offered a way to preserve the (sub)urban enclaves as

[109] Newman, 89.

[110] Jane Jacobs, *The Death and Life of Great American Cities* (Vintage Books, 1961).

[111] Newman, *Creating Defensible Space*, 9, 76.

[112] Joy Knoblauch, "The Economy of Fear: Oscar Newman Launches Crime Prevention through Urban Design (1969–197x)." *Architectural Theory Review* 19 (3) (2014): 341-342, doi:10.1080/13264826.2014.1036492.

[113] Knoblauch, "The Economy of Fear," 337.

[114] Knoblauch, 341.

bastions in a society perceived to be unraveling.[115] The concept was well received by institutions such as housing authorities and government agencies, and Newman expanded his ideas by working with them. A significant one is the Office of Community Design at HUD. Based on his work with HUD, *Creating Defensible Space* was published in 1996. The publication centered on integrating crime prevention and neighborhood safety in the design and planning of urban housing and open spaces. Newman's counterproposal to the "fortress apartment" was a series of semi-private and self-policed spaces mediated through soft power and contingent on constructed hierarchies.[116]

Militarized cities. Carceral logics.

In *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California* (2007), Ruth Wilson Gilmore offers an analysis of the transformations taking place in the mid-1980s. Gilmore describes that the crisis has everything to do with the state's expansion (and retreat) of the military industry. In the postwar period, while much of the war industry was being made over toward manufactured goods, in California, "the political-economic strategy was to seek increased federal investment in the form of prime Department of Defense (DOD) contracts."[117] Funneled into aeronautical and electronic research, the state grew its higher education to produce the required skilled workforce. However, when severely impacted by economic depressions, California saw its military dollars lessen, only to be rescued by the same hand, time and time again.[118] The renovated and growing industry brought waves of migration to the state. The changing socio-economics of California workers, including widening disparities in income and deepening inequalities based on race and gender, brought into action movements and activists. California continued to see changes in the work industries (mining, agriculture, manufacturing, urban sector), which exacerbated economic divisions; accumulated wealth in certain regions; and cultivated "the raw, numerical threat to white supremacy represented by unorganized, but densely concentrated, new and old Californians of color."[119] A strengthening notion of "self-sufficiency and individual requirements to work"[120] was being

[115] Knoblauch, "The Economy of Fear," 341.

[116] Knoblauch, "The Economy of Fear," 337.

[117] Ruth Wilson Gilmore, *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California*, (University of California Press, 2006), 36.

[118] Gilmore, *Golden Gulag*, 37,40.

[119] Gilmore, *Golden Gulag*, 42,56.

[120] Julie MacLeavy and Columba Peoples, "Workfare–Warfare: Neoliberalism, 'Active' Welfare and the New American Way of War." Antipode. 41. (2009):895, 10.1111/j.1467-8330.2009.00701.x.

formed as federal and state capacities were shifted to the local (from a welfare-warfare state to workfare-warfare), leaving vulnerable the already socially, economically, and politically weak or weakened populations. Gilmore observes that the reordering and reconfiguration taking place for more than a couple of decades "idled many productive capacities, including labor, land, [, state,] and finance capital."[121] This is what Gilmore points out as the materializing and accumulating surpluses (and the crisis). In tandem, as brought up earlier, the reaction to insecurities was consolidating into the deepening theme of anticrime. Gilmore tells us that this gave the state an opportunity to use the stagnant surpluses to restructure, and it did so by erecting prisons.[122]

Termed the "prison fix,"[123] the socio-spatial transformation is "concretely recapitulated in the landscapes of depopulated urban communities and rural prison towns."[124] Tracing the continuities of where prisons are built and where people in prison come from, the rural-urban relation is undone, and instead, carceral territories emerge. The disinvestment in agricultural land redistributed some of the land to competing suburban developments and other land uses, while part of it is allocated to sit prisons.[125] Creating carceral spaces across California is not limited to where the prisons are but is instead seen as reorganizing socio-spatial, economic, and environmental relations. The carceral refers to organizing systems inhibiting the production of life. It requires securitizing property (producing borders), criminalizing movement, and reconfiguring these abstractions over time, which generate multiple impacts on the people brought into the systems. Carceral logic is centered on imprisonment.

Again, not limited to the walls of a prison. In an interview with Kelly Hayes, Gilmore says: "each of us and all of us are time, space. That's what it is to be alive, time, space. .... And the extraction of time from people who are detained, captured, disappeared, incarcerated is the annihilation of space by time."[126] That is, "What prison is and unfreedom is, … the extraction of time."[127] Time here is not a unit of measure. Rather, it is what is in the processes of living. And it is precisely the processes of living that are undermined and discarded by carceral systems. What must be done then, Gilmore observes, is to take back time—even provisionally—and it must be reproduced.[128] (It makes visible the vital activity of making things versus erasing things). Gilmore points to how already vulnerable places (and

[121] Gilmore, 57.
[122] Gilmore, 54.
[123] Gilmore, 85-88.
[124] Gilmore, 86.
[125] ...in "forgotten places." Gilmore, *Golden Gulag*, 247
[126] "Ruth Wilson Gilmore on Abolition, the Climate Crisis and What Must Be Done"
[127] "Ruth Wilson Gilmore on Abolition, the Climate Crisis and What Must Be Done."
[128] "Ruth Wilson Gilmore on Abolition, the Climate Crisis and What Must Be Done."

vulnerable people located in vulnerable places) are made more vulnerable. This is what she terms *organized abandonment*. While a significant aspect of Golden Gulag is that it dismantles and highlights the making of "the largest prison building program in the history of the world," it does not stop there.[129] The book brings attention to the opposition against the prison project. Specifically, the work that organizers did to stop and postpone prisons from being built in Central California.[130]

In 1992, Mothers Reclaiming Our Children (Mothers ROC) emerged in South Central Los Angeles and went on to confront the criminal justice system. Evolving into two factions, Mothers ROC and Families to Amend California's Three Strikes (FACTS) were "a pair of political organizations trying to build a powerful movement across the spaces of domestic militarism."[131] Tracing the mobilizing and organizing work of both groups, Gilmore emphasizes that it is critical to be able to recognize "the possibilities and the urgent difficulties of organizing across the many boundaries that rationalize and reinforce apartheid America."[132] With this direction, I look to a coalescing of antiprison and environmental justice organizers in California. It picks up where Golden Gulag ends—with hope and a nod to the conference "Joining Forces: Environmental Justice and the Fight against Prison Expansion." Rose Braz and Craig Gilmore share details of the place from which organizers and researchers continue building in both movements. In an essay with the same title, in 2006, Braz and C. Gilmore wrote that "there is a growing awareness among antiprison activists of the similarities between [antiprison] activism and environmental justice activism."[133] The essay tells of the conference put together by Critical Resistance and the California Prison Moratorium Project in February 2001. The authors recount a struggle to halt the sitting of a new prison, in which antiprison activists collaborated with and "borrowed" from environmental justice activists.[134]

The environmental justice movement recognized that racialized and low-income communities carry a much heavier burden of socio-environmental destruction.[135] They understood that they unevenly bore the brunt of environmentally harmful practices poisoning and shrinking their communities and recognized that their communities were discriminatorily selected. The desire to break the destructive

[129] Gilmore, *Golden Gulag*, 88.

[130] Rose Braz and Craig Gilmore, "Joining Forces: Prisons and Environmental Justice in Recent California Organizing" *Radical History Review*, Issue 96: (2006):98, doi 10.1215/01636545-2006-006

[131] Gilmore, *Golden Gulag*, 239.

[132] Gilmore, *Golden Gulag*, 240.

[133] Braz and C. Gilmore, "Joining Forces," 96.

[134] Braz and C. Gilmore, 98, 104.

[135] Braz and C. Gilmore, "Joining Forces," 96.

cycles of land use damaging socio-economic and cultural networks led them to fight biased targeting, policy making, and regulation in environmental infrastructures. They aimed to "end environmental and economic injustices by eliminating the location of environmentally toxic facilities anywhere."[136] People from urban and rural populations who were organizing together understood the dangers of the "three Ps – police, pollution, and prisons" and soon fused into a movement "across issue areas."[137] While California has not rid itself of the prison project altogether, this movement stopped and prolonged the construction of several prisons. It lastingly marked and transformed the antiprison and environmental movements.[138]

From defensible space to resilience

In the "DOD [US Department of Defense] Directive 4715.21: Climate Change Adaptation and Resilience," listed as a key term, appears *resilience*: the "[a]bility to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions."[139] In the 2024 Budget Request "Mitigating Climate Risk" appears as a subcategory of "Strengthening the resilience and adaptability of our defense ecosystem."[140] The defense ecosystem is described as the network of the DoD, Defense Industrial Base (DIB), "interagency, and array of private-sector and academic enterprises."[141] From the document, it can be understood that in the face of the increasing adversity of climate change, the "readiness" of the Joint Forces and "defense ecosystem" is at risk. Thus, investment in boosting *resilience* is a priority. In monetary value, out of the total amount of $842 billion requested, "$5.1 billion [is] to enhance combat capability and mitigate climate risk by investing in solutions that are mission essential and provide climate benefits, such as increasing platform efficiencies to mitigate logistics risk in contested environments, hardening critical infrastructure, and deploying new technologies that strengthen capability."[142] Additionally, "$146.0 billion [is] for strategic readiness and preparedness of the Joint Force supporting modernizing capabilities for the future fight and sustaining

[136] Braz and C. Gilmore, "Joining Forces," 96.

[137] Braz and C. Gilmore, "Joining Forces," 96, 109.

[138] Braz and C. Gilmore, "Joining Forces," 109.

[139] Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, US Department of Defense, "DOD Directive 4715.21: Climate Change Adaptation and Resilience" January 14, 2016, 11, https://dod.defense.gov/Portals/1/Documents/pubs/471521p.pdf

[140] Office of the Under Secretary of Defense, (Comptroller)/Chief Financial Officer, "Defense Budget Overview: United States Department of Defense Fiscal Year 2024 Budget Request," March 2023, 4-1.

[141] Office of the Under Secretary of Defense, "Defense Budget Overview," 7-1.

[142] Office of the Under Secretary of Defense, 1-6.

current force readiness."[143] The same description of the term *resilience* appears in other DOD documents. Throughout 2022, the departments within the DoD released a Climate Action/Climate Action Plan. In February 2022, the U.S. Department of the Army published its Climate Strategy. The Army pledges to "(optimize) the use of fuel, water, electricity, and other resources, [to] increase [their] resilience while saving taxpayer dollars and reducing [their] impact on the planet."[144] However, the document does not account for military activities (training, war activities, etc.). Released in the following year, the DoD Plan to Reduce Greenhouse Gas Emissions states that "Emissions that result from DoD activities" "is not as well developed, in part due to the challenges of inconsistent (or absent) standard requirements of data collection for all categories of … emissions."[145] The DoD is not held accountable for its environmental degradation. The US is not unique in this regard, there is a blind spot toward military footprints internationally. In an effort since 2018, the Conflict and Environment Observatory called for transparency and consistency from global militaries for all activities in reporting emissions while proposing ways to develop comparable reporting.[146] The US is ranked number one in global military spending and there is still a "very significant gap in reporting."[147]

California has upwards of 30 defense facilities that account for all the military services. This expanse brings it up to twice as high as any other U.S. state.[148] Since 2002, to be cautious of military land use and better coordinate planning, local governments have to take their operations into account, reflecting it in the general plan. The result is the California Advisory Handbook for Community and Military Compatibility Planning. It describes that the military and California have an extensive and thriving record of engagement and goes on to share the details of their involvement.[149] The document notes that while earlier, military activities were relocated away from civilian populations, there is now an "encroachment" onto military lands.[150] They pin this on the rapidly developing suburbs and commercial

[143] Office of the Under Secretary of Defense, 1-5.

[144] Department of the Army, Office of the Assistant Secretary of the Army for Installations, Energy and Environment, "United States Army Climate Strategy," February 2022,3.

[145] Office of the Under Secretary of Defense for Acquisition and Sustainment, "Department of Defense Plan to Reduce Greenhouse Gas Emissions," April 2023, 2-3, https://media.defense.gov/2023/Jun/16/2003243454/-1/-1/1/2023-DOD-PLAN-TO-REDUCE-GREENHOUSE-GAS-EMISSIONS.PDF

[146] Conflict and Environment Observatory, https://ceobs.org/projects/military-emissions/

[147] The Military Emissions Gap, https://militaryemissions.org/

[148] Office of Governor Gavin Newsom, "California and National Defense," https://militarycouncil.ca.gov/m_defenseincalifornia/#:~:text=California%20and%20National%20Defense,in%20a%20rapidly%20changing%20world

[149] Governor's Office of Planning and Research, "California Advisory Handbook for Community and Military Compatibility Planning," 2016, Section 1.

[150] Governor's Office of Planning and Research, Section 1; Appendix B-Policy Examples.

areas. The problem with encroachment into military use lands is explained as "degradations of training operations," and if these are drastic enough for the military to relocate, it would leave an economic affect in the region.[151] In this sense, collaboration is seen as mutually beneficial.

In the entire California Advisory Handbook for Community and Military Compatibility Planning, one reference is to *wildfire*: "The Geoportal provides geospatial data for multiple categories including public safety (e.g. fire threat, natural hazards, tsunami hazards, water quality, wildfires, etc.)."[152] There is also a note on fire suppression: "The first step toward this new partnership was a city recommendation to the Navy to combine its fire suppression capability with the Army and the city."[153] While the Community and Military Compatibility Planning in California did not center *wildfires*, it does have a section on "Climate Change Adaptation and Resiliency," which pointed to the forthcoming updates in adaptation within the state at the time.[154]

The goal of resilience is to repackage the fight against *wildfires*. In 2018, within CalFire, the Wildfire Resilience Program was established to facilitate (technically and financially) efforts to achieve wildfire resilience and assist with the fecundity of lands.[155] Likewise, the USFS stated that they are collaborating with partners to "restore healthy, resilient, fire-adapted ecosystems."[156] In 2022, Governor Gavin Newson set up the California Wildfire & Forest Resilience Task Force. It claims to build a novel alliance to thwart destructive wildfires, restore the "natural environments," improve "resiliency of the forests," and simultaneously "align the activities of federal, state, local, public, private and tribal organizations. Ironically, it describes the group as "proactive."[157] Or, to see it in another way, it proposes a type of amnesia. To erase the *fear built for decades*. To forget the disdain for fire. To not remember that fire knowledge is not part of the

---

[151] Governor's Office of Planning and Research, Section 1.

[152] Governor's Office of Planning and Research, Appendix A: Tools for Locating DoD Installations and Activities in California.

[153] Governor's Office of Planning and Research, Section 5.

[154] Governor's Office of Planning and Research, Section 1.

[155] CalFire, "Wildfire Resilience," https://www.fire.ca.gov/what-we-do/natural-resource-management/wildfire-resilience. Senate Bill No. 901, 2018, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB901

[156] US Forest Service, " Resilient Landscapes," https://www.fs.usda.gov/managing-land/fire/resilient-landscapes#:~:text=The%20U.S.%20Forest%20Service%20is,vegetation%20that%20feeds%20extreme%20wildfires.

[157] California Wildfire & Forest Resilience Task Force, "An Unprecedented Response to an Unprecedented Challenge," https://wildfiretaskforce.org/about/

West's history. Instead to become part of the effort of resilience in which "There's a role for everybody to do their part."[158]

[158] California Wildfire & Forest Resilience Task Force, "An Unprecedented Response to an Unprecedented Challenge," https://wildfiretaskforce.org/about/

The collapse of linear time

"...unfiltered shots of skyline that are blood-orange, green, yellow, looking more like an alien, Blade Runner sort of landscape than any earthly vision. (According to NASA, this discoloration is occurring because smoke particles are blocking certain wavelengths from the sun.) The multiple emergencies confronting our respiratory cilia represent an emergency born of violence that "we" (this term is too loaded to use un-self-consciously) refuse to break with, let alone acknowledge. It is the collapse of linear time, of colonizer and capitalist time, in a sense."[1]

– Robyn Maynard and Leanne Betasamosake Simpson, 2022
Rehearsals for Living

[1] Robyn Maynard and Leanne Betasamosake Simpson, *Rehearsals for Living* (Haymarket Books and Knopf Canada, 2022), 331, eBook.

"Leanne Betasamosake Simpson is a renowned Michi Saagiig Nishnaabeg scholar, writer and artist, who has been widely recognized as one of the most compelling Indigenous voices of her generation. Her work breaks open the intersections between politics, story and song–bringing audiences into a rich and layered world of sound, light, and sovereign creativity." https://www.leannesimpson.ca/

Chapter 3.
Southern California. Imperiled Landscapes.

In parts of Southern California—in the homelands of Cahuilla, Acjachemen, Tongva, Kizh, and Payómkawichum Peoples—colonial logics reconstructed the socio-cultural and built environments, and capitalist endeavors continue to strangulate the healthy movement of life forms. While the rivers dry up or give off a foul stench, and their flows are forgotten or discarded from contemporary public memory, smoke appears reminiscent of scattered movements. At times when traveling distances from fires not visible, the stifling smoke, intertwined in life cycles of water and sediment, carries within them traces. Following the obscured and redirected movements of water and smoke within the socio-spatial environments, the chapter combines seemingly disparate landscapes transformed to generate profit. The chapter outlines some of the ways in which land, water, and people are organized in centering the commodification of the Santa Ana River since the nineteenth century, the development of the citrus industry that follows, the ever-expanding urbanization into the present, and the sitting of prisons. I look at the relations of water and smoke to people and in turn, how land use, under colonial and capitalist directives, deters movements necessary for living.

To begin, I think with works by Charles Sepulveda and Beth Rose Middleton Manning. Sepulveda's essay "Our Sacred Waters" observes a lack of connection between non-Natives and their surroundings in contrast to Tongva and Acjachemen life and culture intricately tied to their respective homelands—crucial for understanding the production and maintenance of knowledges by Natives and non-Natives.[1] Sepulveda highlights this point by sharing that not many non-Native people can identify the largest riparian ecosystem of Southern California, nor are many aware of the Native worlds that inhabited the Santa Ana River's "environmental zone since time-immemorial."[2] The organization of lands and waters under American occupation drastically differs from that of Native habitation

[1] Sepulveda, "Our Sacred Waters."
[2] Sepulveda, "Our Sacred Waters," 41.

and stewardship, which provided for humans and more-than-humans for centuries. In contrast, over the past 200 years by modifying seventy-five percent of the vegetation and shrinking ninety percent of wetland ecosystems have deteriorated, leaving fragments of "Blue oak woodlands, riparian zones, and grasslands" with debilitating consequences to all life.[3] Sepulveda attributes this to the "Americans always-incomplete project of transforming the earth for their needs."[4] *Their needs*, he explains, are tied to the expansion of empire—and the disruption and destruction of life that is necessarily required. The Americans, like the Spanish, justified this approach with their notions of Indigenous people as "uncivilized, non-human," and together with nature as "*wild*."[5] Hence, land, water, and people were "bent to the will of white supremacy in order to benefit 'white life.'"[6] In a similar vein, in *Upstream*, Middleton Manning observes that the "social impacts, cultural disruption, and destruction of communities represent incalculable and irredeemable costs, and yet they are dismissed as externalities in a narrative of national progress."[7] Middleton Manning questions this so-called progress and who its beneficiaries might be, analyzing relationships and drawing conclusions similar to Sepulveda that not only are Native lives and worlds considered dispensable within these conceptions, but capital accumulation is of the utmost importance.

Following Mexican governance and the arrival of the Americans, a shift took place with the intense commodification of the Santa Ana River, "changing its role … to a source of profit for an emerging agricultural industry, as well as a source of water for a growing urban population."[8] At first, with the flooding of agricultural lands and then from developing too close to the river, the new settlers found themselves and their crops at risk of the devastating floods (every so often). With this, the Santa Ana River was misidentified as a flood control river. The early American settlers capitalized on (mis)identifying the Santa Ana River as a flood control and it continues to be capitalized on today. Sepulveda describes the consequences of categorizing the Santa Ana River in this way and its intimate relation to capital accumulation by drawing attention to the devastating flood of 1938, followed by the construction of the Prado Dam. He explains that the Prado Dam facilitated "the

[3] State of California, Natural Resources Agency, Department of Water Resources, "California Water Plan Update 2023: Public Review Draft," September 2023, 2-26.

[4] Sepulveda, "Our Sacred Waters," 50.

[5] Sepulveda, 50.

[6] Sepulveda, 50.

[7] Beth Rose Middleton Manning, *Upstream: Trust Lands and Power on the Feather River*, (University of Arizona Press, 2018), 9.

[8] Kyle Larkin, "The Transformation of the Santa Ana River: A Story of Changing Demographics, Values, and Landscapes," *The UCI Undergraduate Research Journal*, (2015): 25, https://archive.urop.uci.edu/journal/journal15/03-Larkin.pdf or https://bpb-us-w2.wpmucdn.com/wp.ovptl.uci.edu/dist/e/3/files/2023/09/2015_03-Larkin.pdf

post-world war II building boom which began conversion from large agricultural operation to housing and commercial development projects."[9] Later, in 1969, following another flood, the Santa Ana River was partially lined with concrete to force "her into submission, domesticating her."[10] Consequently, Sepulveda reminds us, bringing a stint of increased development and land values yet again. The desire for economic gain was the hallmark of the organization of people and places with the start of American occupation, particularly in moving westward to California. The characterization of California during this period is aptly described as a "society mesmerized by the myth of superabundance."[11] Although overconsumption and exploitative use depleted the river and floods damaged crops, this myth gradually crumbled upon itself, but it did not disappear from colonial or capitalist desires.

Sepulveda reminds the reader that while the Non-Natives did not understand the land "as continuing to be Indigenous space" it is crucial to acknowledge that "it was never given to the colonizer."[12] Middleton Manning shares that in almost every place in the US that is dammed (or channeled, etc.), the "lands and waters were and are appropriated from [Indigenous] People by illegal and quasi-legal means."[13] To appropriate water, colonizers used riparian law and prior appropriation (not necessarily in an ordered manner, as will be discussed below) to shape the ways water was used until the twentieth century. The Spanish colonizers used Riparian law—similar to the Spanish Plan of Pitic—granting landowners along the riverbanks usage of a "'reasonable' amount of river flow for their own intents and purposes."[14] The American settlers challenged this with what was known as prior appropriation, which did not require ownership of land to use water for "beneficial purposes."[15] The essay titled "The Transformation of the Santa Ana River" informs the reader that because access to water is disparate in the two constructions, laws for water rights were left open-ended into the early twentieth century, giving rise to lawsuits and legal feuds among the Americans. Even so, a legal feud from 1880 over rights to water seems to have "legitimized American power in the region."[16] The case involved the Anaheim Union Water Company taking the Semi-Tropic Water Company (Orange County) to court. Since drought and the overuse of water by the growing population and for agricultural purposes led to water shortages, the people of Anaheim (Anaheim Union Water

[9] Sepulveda, "Our Sacred Waters," 50.
[10] Sepulveda, 51.
[11] Norris. Hundley Jr., *The Great Thirst: Californians and Water: A History* (University of California Press, 2001), 67.
[12] Sepulveda, "Our Sacred Waters," 51.
[13] Middleton Manning, *Upstream*, 4.
[14] Larkin, "The Transformation of the Santa Ana River," 26.
[15] Larkin, 26.
[16] Larkin, "The Transformation of the Santa Ana River," 26.

Company) claimed that those further upstream, the Semi-Tropic Water Company, were utilizing too much water, leaving them with insufficient supply.[17] Anaheim was based on the prior appropriation doctrine, while Semi-Tropic on riparian rights, and the verdict favored prior appropriation. However, the ruling was appealed and overturned. With no resolution from the legal outcomes, the case was settled outside the court by equally distributing "surface and subsurface flow."[18]

Nonetheless, the case was successful in "establishing a foothold in a region of natural abundance and subsequently exploiting its resources for economic and material gain."[19] These lawsuits continue into the twentieth century. In 1932, a similar suit was brought by Orange County ranchers (Orange County Water District, OCWD) "against upstream users," or "interests"—as stated in the "Santa Ana Integrated Watershed Plan Environmental and Wetlands Component."[20] Many more lawsuits ensued. Norris Hundley Jr., known as the "historian of western water rights," describes California's water law as a "patchwork" composed of "flawed statutes and legal principles out of step with the times."[21] He points out that the water management system, coming from a plethora of legal battles, remains a hodgepodge.[22] He reflects that based on the Californians and Americans legacy of exploitative practices it is characteristic for there to be shortcomings in water policy. Hundley notes that there are also contradictions in the "illogical" ambitions regarding regulations such as concurrent growth and preservation.[23] However, while Hundley seems to think that the *failing* laws are the root of the problem, the laws seem to align with and manifest colonial and capitalist desires. Water law is used to justify and accumulate capital and profit via water use. That is, "in capitalist societies, law organizes repression and 'materializes the dominant ideology.'"[24] Within the dominant ideologies such as colonialism and capitalism, the scope of "growth, environmental restoration, and at least some wilderness preservation" is inherently limited.[25]

[17] Larkin, 30.

[18] Larkin, 31.

[19] Larkin, 32.

[20] EIP Associates, "Santa Ana Integrated Watershed Plan Volume 2: Environmental and Wetlands Component," Santa Ana Watershed Project Authority, 2002, 31-32, https://sawpa.gov/wp-content/uploads/2016/09/IWP-2002-Vol2.pdf

[21] Hundley, *The Great Thirst*, 527.

[22] Hundley, 527.

[23] Hundley, *The Great Thirst*, 561.

[24] Nicos Poulantzas quoted in Jennifer Ponce de León, *Another Aesthetics is Possible: Arts of Rebellion in the Fourth World War* (Duke University Press, 2021), 130.

[25] Hundley, *The Great Thirst*, 561.

The river that Riverside was river side to

Riverside County is part of what has come to be known as the Inland Empire. It falls within the homelands of the Tongva People, as does the Los Angeles Basin, the San Gabriel Valley, Orange County, and the Channel Islands.[26] Spanning "from the mountains to the Pacific," Tongva homelands comprise the Santa Ana River Watershed; Cahuilla homelands are south and east of the Santa Ana River Watershed; Payómkawichum homelands are south of the Santa Ana River Watershed; and where the Santa Ana River and the Pacific Ocean meet are Acjachemen homelands.[27] Around the Santa Ana River, Tongva and Acjachemen people share homelands. While certain places continue to be of sacred importance to the Tongva and Acjachemen in the vicinity of the Santa Ana River, historically, both had villages that no longer exist.[28] One reason for the disappearance of Tongva villages is attributed to the Spanish colonizers during the 18th century when Indigenous inhabitants were displaced and forced to build the San Gabriel Mission.[29] However, contrary to American National History, many Native people and places survived the different forms of colonial violence. Sepulveda emphasizes that people "often resisted colonization, sometimes through mere refusal, and as a result they continue to survive into the present [*note:* including the later American colonization which shaped the regions somewhat differently], retaining cultural knowledge."[30] These knowledges bring the understanding that Indigenous peoples such as Tongva and Acjachemen intricately learned their environments, embraced seasonal changes, and adapted to living with their surroundings.

The Santa Ana River, the Tongva name for which is Wanawna, is southern California's most extensive riparian ecosystem and one example that emphasizes an interdependent relationship that once was.[31] Sepulveda describes that Santa Ana received heavy seasonal rainfalls flooding the area. "It was seasonally a wide river during winter and spring and could have a slight flow by the end of summer."[32] The flooding kept the marshes and wetlands "producing plant material, such as tule, used for many purposes including house and boat

[26] Sepulveda, "Our Sacred Waters," 49.

[27] Sepulveda, 49.

[28] James V. Fenelon and Julia Bogany, "Indigenous Water Talks—Research on the Santa Ana and Los Angeles River Environs," Water Resources and Policy Initiative Annual "Virtual" Conference, California State University San Bernandino, 15 April, 2021, /https://www.calstate.edu/impact-of-the-csu/research/water/Documents/conference/2021/indigenous-water-talks-research-on-the-santa-ana-and-los-angeles-river-environs.pdf

[29] Sepulveda, 49.

[30] Sepulveda, "Our Sacred Waters," 49.

[31] Sepulveda, 40, 41.

[32] Sepulveda, 47.

construction."[33] Such observations tell us that Indigenous stewardship of the Santa Ana River contained and nourished multiple species within its ecosystem—enabling the flow of life cycles to produce and reproduce, sustaining necessary movements of water and matter. In the twenty-first century it looks different. In 2018, Sepulveda wrote about his first visit to the Santa Ana River some years earlier, saying that it "contained the worst smelling water [he had] ever been close enough to smell."[34] He goes on to share that "Instead of flowing, it sat in stagnant pools of brackish water of a deep green almost black in color."[35] Through processes of settlement, he writes, the perennial "living river" is now left with "runoff from sewage treatment and irrigation" during the summer.[36]

In a report from 1977, *Development of Water Facilities in The Santa Ana River Basin California, 1810-1968*, it is acknowledged that there are processes of settlement. It categorizes the "history of man's influence on the Santa Ana River" into four periods: "the I***** period, the Spanish mission period, the Mexican-Californian period, and the American period."[37] The report does not explicitly acknowledge that the process of settlement is settler colonial in structure, that it is a process of the *elimination of the Native* inhabitants.[38] Nor does it recognize Native peoples' histories. When describing the period of Native stewardship before Spanish colonization, it states: "No evidence has been found that indicates the length of occupancy of the prehistoric settlements discovered in the basin, nor is it known whether or not the I***** found by the Spaniards were descendants of those ancient inhabitants. All evidence indicates that no form of agriculture was practiced in the basin until the Spanish mission period."[39] The omission and erasure of Native people from institutional knowledge productions is usual practice, even for the period prior to colonization. (Perhaps part of the attempts to repress histories and to advance the myth of uninhabited and unused lands). There are many examples of the dismissal of Native presence and practices. In discussing her research on Feather River, Middleton Manning writes:

---

[33] Sepulveda, 47.

[34] Sepulveda, 42.

[35] Sepulveda, 42.

[36] Sepulveda, 40.

[37] M.B. Scott, California Department of Water Resources, San Bernardino Valley Municipal Water District, Western Municipal Water District of Riverside County, "Development of water facilities in the Santa Ana River Basin, California, 1810-1968: a compilation of historical notes derived from many sources describing ditch and canal companies, diversions, and water rights," U.S. Geological Survey, 177, 7, https://pubs.usgs.gov/of/1977/0398/report.pdf. https://web.archive.org/web/20070701051151if_/http:/wri.csusb.edu/web-pages/archives/saw-biblio/draftFinalSantaAnaRiverWatershedBibliography.pdf

[38] Wolfe, Patrick, "Settler Colonialism and the Elimination of the Native." *Journal of Genocide Research* 8 (4) (2006), doi:10.1080/14623520601056240.

[39] Scott, "Development of water facilities in the Santa Ana River Basin, California, 1810-1968," 8.

> An examination of the California Department of Water Resources' (DWR) historic and contemporary promotional and informational materials on the SWP (as housed in the Water Resources Center Archive at the University of California Riverside, and available from the SWP website) reveals no mention of the contested nature of the primarily Mountain Maidu lands that provide water to 29 water agencies, 25 million Californians, and 750,000 acres of irrigated farmland downstream.[40]

It is necessary to acknowledge that these statements echo processes of colonial knowledge production (discussed in chapter 4) and methods that consistently erase Native existence, settlements, and practices from California's pre-colonial and colonial history *and the present*. The established knowledge produced under American occupation is predominantly devoid of memories of Indigenous homelands, that is, as they had been created and maintained with their respective stewardship practices. However, there is a desire on the part of the Americans to recall the period of Spanish colonization. Sepulveda describes the making of Riverside as continuing a legacy of the "Spanish imaginary."[41] Drawing on the aesthetics from the *Spanish imaginary*. This will be discussed later in the chapter; now, I turn to water use during the Spanish settlement.

In describing some of the changes that took place when the Spanish arrived, and later the Mexicans and Americans, Sepulveda highlights the extremely different approaches taken towards the Santa Ana River by the colonizers from that of the Native inhabitants. He shares examples of the Acjachemen made to irrigate land with "ditches called zanjas" at San Juan Capistrano; to "herd the cattle that depleted and sullied their water sources and ate their sacred plants;" and the Tongva forced to transform the mountains to build Mission San Gabriel.[42] The first diversions made by the Spanish colonizers from the Santa Ana River were around 1810-1811 for crop irrigation and initiated the "riparian right" discussed above. Under Spanish colonization and during the Mexican-Californian (or rancho) period, although the river diversion to irrigate was in practice, it remained a "localized practice."[43] With American colonization, over time, the life-sustaining systems of the Santa Ana River were heavily interrupted by dams and polluted by various contaminants due to greater demands of water quantity and the scale of irrigation use. As the incoming Americans' desire to exploit the Santa Ana River for agricultural and housing development established the beginning of feuds over rights to water, it is argued that "1857 would mark the beginning of the end for the

[40] Middleton Manning, *Upstream*, 5.

[41] Sepulveda, "California's Mission Projects."

[42] Sepulveda, "Our Sacred Waters," 50.

[43] Scott, "Development of water facilities in the Santa Ana River Basin, California, 1810-1968," 9.

river's status as a perennial waterway."[44] It suggests that the pivotal moment of the transformation of the Santa Ana River from a perennial river to one that "hardly resembles a river" was between the 1850s-1880s—rather than the "traditional" view that the construction of the Prado Dam (1940-1) was the turning point.[45]

A closer look into the transition from "Mexican ranchos to American farming towns" shows how the Santa Ana River and its relations to the surroundings were drastically transformed with "the emergence of American settler values in the mid- to late-nineteenth century."[46] Returning to the essay "The Transformation of the Santa Ana River," the reader is presented with negative changes in the river. In doing so, the author characterizes the river literally and figuratively: "literally," as in, the overconsumption of water for agricultural and urban development purposes diminishing the rivers' flow; and "figuratively," that is, the depleted flow plummeting the aesthetic value of the river as a "natural wildlife- and ecosystem-supporting waterway."[47] The argument is that these transformations within the landscape further exacerbate slighted "aesthetic or ecological concerns," which continue into the present, by "opening the door for later damming and channeling."[48] The duality presented here, the *exploited river* or the *river as a natural wildlife*, is a common characterization (made by environmentalists and those referring to the environment) of the present deterioration versus a *past* in which the landscape was *natural*, *wild*, and *without human influence*. In the same essay, it is noted that "The expansion of irrigation measures initiated the transformation of the Santa Ana River from a natural and wild source of life to the irregular stream that lingered in the wake of intense commodification."[49] It does not seem to move beyond these categorizations of the river. In fact, it describes that intensified irrigation recast the river from "natural and wild" to its contemporary condition. In another instance, it says: "This prioritization of urban and agricultural water demands left the preexisting *wildlife and natural* [emphasis mine] ecosystem devastated."[50]

As discussed at length in chapter 1, the duality is turned to over and over again. Hundley references Roderick Nash, sharing that "Nash's hope for wilderness is straightforward. Humanity, he pleads, should 'keep the options of the future open with regard to something [wilderness] that, by definition, mankind can never create.'"[51] In descriptions of the *historic*, *pre-contaminated*, or *undeveloped* areas

[44] Larkin, "The Transformation of the Santa Ana River," 28.
[45] Larkin, 25.
[46] Larkin, 26.
[47] Larkin, 32.
[48] Larkin, "The Transformation of the Santa Ana River," 32.
[49] Larkin, 29.
[50] Larkin, 32.
[51] Hundley, *The Great Thirst*, 541.

of the Santa Ana River, it is constantly noted as *wild, untouched, natural,* or supporting *wildlife*. For example:

> Although largely an urban watershed, the Santa Ana Watershed also includes many wild, untouched areas such as the San Bernardino National Forest and Cleveland National Forest. These wild areas are linked by riparian corridors and significant habitat such as the San Timoteo wetlands home of the least Bell's vireo.[52]

With the extent of extraction, exploitation, misuse, and overconsumption of *resources* in the making of the US, it is as if use and habitation are synonymous with colonial and capitalist organizations. As such, the non-Native desire for a *wild, untouched nature* continues to percolate or surge. Seeing water, land, and life as *wild* falls within what Sepulveda describes as a "disparity in views surrounding land and the concept of 'civilization.'"[53] However, in recognizing the destruction of the Santa Ana River, Sepulveda situated the desire for a *living river* within Indigenous stewardship. That is, in the dismantling of racial hierarchy, outside of categorizations such as *wild*, and with Indigenous sovereignty.

The concrete lining imprisoned the river

The movement of water in the Santa Ana River Watershed determines the environment along the waterways and the contiguous terrains. When the water is diverted and redirected through barriers "materials, energy, and organisms associated with the...environment" are unfavorably affected based on the magnitude of the changes and can likely disrupt the ecosystems.[54] The series of smaller diversions and channels built over time in the Santa Ana River Watershed began straining the river's functionality. In addition, the water needs of the agricultural and urban expansion in some regions were not being met by the river. Then there were the every-so-often devastating floods which created enough fear that eventually led to the construction of the Prado Dam in 1941 and the Seven Oaks Dam in 1999.[55] Agricultural lands, cities, towns, and industrial areas grew along and outward from the Santa Ana River. Dangerously close to the river and consequently at direct risk for flooding, the actions taken to *protect* these areas for agriculture and development—*land value*—have proven to be disastrous for the life of the river and all its interdependent species. As described above, much of the Santa Ana River flowing from the City of San Bernardino to the City of Riverside is managed as a flood control facility.[56] With twenty percent of the Santa Ana River

[52] EIP Associates, "Santa Ana Integrated Watershed Plan Volume 2," ES-2, 60.
[53] Sepulveda, "Our Sacred Waters," 50.
[54] EIP Associates, "Santa Ana Integrated Watershed Plan Volume 2," 45.
[55] EIP Associates, 25-26.
[56] EIP Associates, 48.

lined with concrete, which is modest in comparison to other rivers in Southern California, around 2015 it was noted that the Santa Ana River "hardly resembles a river at all. Instead, a series of man-made concrete channels and dams dominate the river's course to the sea."[57]

The very structures constructed to bring water to where its use was created harmed the river, endangered species, or made them extinct, disrupted life cycles and movement, and those using the water were gradually sickened (people, fish, etcetera). Sepulveda points out that while the repeated flooding of the river is marked in historical records, regardless of this existing knowledge, "the lower flood plain became an important location for American development and agriculture."[58] Despite the known risk of floods—as there were colonial records of the floods in the basin before American settlement as far back as 1770—settlements and agricultural lands continued to develop under American occupation and flood control management was (and is) the strategy relied upon to continue expansion. Looking at the flooding records of the river, some appear more destructive and damaging than others to property, crops, homes, and life (in order "to benefit 'white life'"). Sepulveda tells us the flooding was predominantly reported and understood as *Santa Ana's "Benders" and "Rampages*."[59] He makes the argument that because the Santa Ana River was adversely impacting surrounding property it was considered necessary for it to be tamed, or rather, the term he uses is domesticated.[60] It was domesticated via being categorized as a flood control. Sepulveda notes that the American's misidentification of the Santa Ana River subsequently led to the categorization of the river as a flood control within plans by the U.S. Army Corps of Engineers, counties, and private investors.[61]

As urbanization continued to grow and replace agricultural lands starting in the 1940s, so did the risk of damage and attempts to control the river.[62] Hundley describes a similar process in Los Angeles: "Despite the river's natural tendency to occasionally leap its banks and wreak great havoc, most notably for the twentieth century in 1914 and 1938, people settled in large numbers on its floodplain, in part induced by the false sense of security created by the water-control projects constructed following the major disasters."[63] Similarly, Sepulveda describes that overtime, "In order to control and domesticate the river from her 'rampages' and

[57] Larkin, "The Transformation of the Santa Ana River," 25.
[58] Sepulveda, "Our Sacred Waters," 48.
[59] Sepulveda, 47.
[60] Sepulveda, 39.
[61] Sepulveda, 49.
[62] Scott, "Development of water facilities in the Santa Ana River Basin, California, 1810-1968," 227.
[63] Hundley, *The Great Thirst*, 102.

'benders' she was further channelized, dammed, diverted, and held in reservoirs"—"ultimately, to domesticate the 'wilderness.'"[64] This, Sepulveda describes, allows the expansion of American occupation across the Santa Ana basin.[65]

According to the 1977 report, six floods were "outstanding."[66] One is the flood of 1938, as noted above, after which the lower part of the Santa Ana River was dammed by the U.S. Army Corps of Engineers.[67] This was the Prado Dam in proximity of the intersection of Orange, Riverside, and San Bernardino Counties. The dam has been exceptionally divisive for the spike in allocating water within Orange County.[68] To construct the dam a Native village was flooded. Dispossessing the Indigenous, Californio, and Mexican residents. Disturbing and building on part of their cemetery.[69] Sepulveda laments, "Even in death Tongva and Acjachemen are not beyond having to submit to the logic of domestication and submission."[70] Ironically, in the same report from 1977, it was said that structures erected following the devastation of 1938 were to "protect life and property."[71] Read: *to benefit white life*. Native life (and death) displaced in order to settle and *protect white life and property*. When next major flood occurred in 1969 the U.S. Army Corps of Engineers lined part of the river with concrete[72] and following this, the continuously increasing water demands once again coupled with the dangers of flooding, led to the construction of the Seven Oaks Dam in the City of San Bernardino. The claim was that the 550 feet structure would "save Watershed property owners millions of dollars in flood insurance premiums."[73] In his analysis, Sepulveda shows a connection in which he characterizes the floods of 1938 and 1969 as crises. In reaction, there is the construction of the dam and concrete lining of the river as "domesticated into submission."[74] As brought up earlier, each of the actions is followed by a surge in development in the region. This is reasserted in the report titled the "Santa Ana Integrated Watershed Plan," which notes, following the 1938 flood, parts of the Santa Ana Watershed were severely impacted.[75] The City of Riverside and its citrus groves did not fare well under the flooding conditions and the Prado Dam was planned to protect

[64] Sepulveda, "Our Sacred Waters," 48.
[65] Sepulveda, 48.
[66] Scott, "Development of water facilities in the Santa Ana River Basin, California, 1810-1968," 226-227.
[67] Noted by Sepulveda, Larkin, and Scott. EIP Associates, "Santa Ana Integrated Watershed Plan Volume 2," 33.
[68] EIP Associates, 69.
[69] Sepulveda, "Our Sacred Waters," 50.
[70] Sepulveda, 50.
[71] Scott, 226-227.
[72] Sepulveda, 50-51
[73] EIP Associates, 69.
[74] Sepulveda, "Our Sacred Waters," 50.
[75] EIP Associates, "Santa Ana Integrated Watershed Plan Volume 2," 31.

agricultural land and urban growth—as Sepulveda notes—"to expand and nourish empire."[76]

With the extent of changes to the watershed, Santa Ana River's ecosystems substantially deteriorated.[77] The concrete lining in the river impeded groundwater recharge, harmed the habitat, and decreased the water quality.[78] The degradation of water and the environment through flood management and overconsumption continued to mark the early twenty-first century. Clearly an unhealthy river, there are recorded and documented ways that it is determined unfit for use into the present. With the focus on groundwater storage, flood control structures are not the dominant approach and there is a growing interest in restoring rivers and enhancing the water quality.[79] Sepulveda points out that the motivation to recover the river is for its use as a commodity instead for the river to function as a living river, supporting its environment. The health of the river is compounded with its economic value. Rather than prioritizing the river's ecosystem, how it benefits "white life" is given importance. Sepulveda critiques this observation of once again centering the domestication of the river for profit.[80] Included is the recreational value determined through the aesthetic of the river. These are superficial values given to the "natural river."[81] Sepulveda pointed out that while river restoration plans were in the works in 2005, the Tongva and Acjachemen were not brought into the conversation. This, he explains, was by structure. That is, Indigenous people often "have to continuously educate people about their very existence."[82] Other times, when projects do not involve or liaison with Indigenous people, there are gaps and omissions in knowledge which are not considered in the decision-

[76] Sepulveda, 50.

[77] EIP Associates, 51.

[78] EIP Associates, 67-69.

[79] Olivia Walker, Public Affairs Officer, Cleveland National Forest, "Trabuco Dam Removal to Begin in Silverado and Holy Jim on the Cleveland NF," https://www.fs.usda.gov/detailfull/r5/home/?cid=FSEPRD535980

Trabuco Ranger District Cleveland National Forest "Trabuco Ranger District Dam Removal and Aquatic Organism Passage Monitoring," Annual Report, 17 November, 2017, https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd568942.pdf

US Army Corps of Engineers , "Prado Basin Feasibility Study, https://www.spl.usace.army.mil/Missions/Civil-Works/Projects-and-Studies/Prado-Basin-Feasibility-Study/

Allison Hacker, "A Programmatic Approach to Dam Removal and River Restoration: Cleveland National Forest, CA," 9 September, 2019, https://www.americanrivers.org/2019/09/a-programmatic-approach-to-dam-removal-and-river-restoration-cleveland-national-forest-ca/

[80] Hundley, *The Great Thirst*, 446-447.

[81] Hundley, 445.

[82] Sepulveda, "Our Sacred Waters," 51.

making process, thus resulting in detrimental proposals for Native people and places.[83]

However, even when Native liaisons are consulted with, at times it is processed as a formality, that is, sharing the planned project at short notice quite late in the project. Other times the information is sidelined and not taken into serious consideration as Western knowledge production is favored.[84] One of countless such projects is the Riverside-Corona Feeder (RFC) Realignment. Proposing a pipeline realignment in the San Bernardino and Riverside Counties, the project needed to undertake a cultural resources survey.[85] The report was produced in 2009 using maps based on data by A. Kroeber and C. Merriam. The authors describe the area within the project as that with "uncertain ethnographic occupancy." [86]

To this day, there remain types of knowledges by respective Indigenous peoples of how their homelands were inhabited, manipulated, and taken care of, where previous settlements, towns, and villages were located, where several types of foods were harvested. However, this knowledge is dismissed by the institutions, agencies, and authorities coming in with yet another project in the name of progress.[87] Sepulveda reminds us about the consequences of dismissing Native knowledge and practice, for instance leading to misrecognizing rivers and people. He points to the ill-treatment of the Santa Ana River based on the incorrect perception of it as a flood control. He makes a link, saying that the "misrecognition of the Acjachemen and Tongva has similarly affected their ability to maintain sovereignty over their territories."[88]

In *Upstream*, Middleton Manning studies some areas within the homelands of the Maidu and other Native members close by (Paiute, Pit River, and Washoe) which were selected for producing hydroelectric power, mining, or other types of development.[89] In the processes of making these lands available to such

---

[83] Sepulveda, "Our Sacred Waters," 51.

[84] One example: Coffman Associates, Inc., "Initial Study for French Valley Airport Riverside County, California," Riverside County, August 2010, https://rcfva.com/sites/g/files/aldnop191/files/migrated/Portals-0-Docs-FinalFrenchValleyInitialStudy081710.pdf

[85] Amanda C. Cannon and Michael K. Lerch "Cultural Resources Assessment of the Riverside-Corona Feeder Realignment, San Bernardino and Riverside Counties, California," Albert A. Webb Associates, April 2009.

[86] Cannon and Lerch "Cultural Resources Assessment of the Riverside-Corona Feeder Realignment, San Bernardino and Riverside Counties, California," 13.

[87] Middleton Manning, *Upstream*, 9.

[88] Sepulveda, "Our Sacred Waters," 51

[89] Middleton Manning, *Upstream*, ix.

endeavors, Native resources, ways of life, cultural places, and economic capabilities were severely harmed to the point of incapacitating many life forms, places, and livelihoods. Middleton Manning informs the reader that as she grew the geographic parameters of her study, she observed that Native people in other places were impacted by similar forces of *state-sanctioned development*—or organized violence. She describes that the presence of reoccurring constellations of "trespass, extraction, and appropriation" toward private ventures and expansion of the nation continue to sit within an expansive project "now designated for additional hydropower production, conservation and restoration to mitigate the impacts of historic development and increased water storage."[90] Middleton Manning writes that "...Native lands and communities have been treated as sacrifice zones for national priorities of irrigation, flood control, and hydroelectric development" "...leaving a painful legacy of displacement and cultural and community disruption."[91]

One of the devastated regions within homelands of the Mountain Maidu Middleton Manning looks at is the Feather River watershed. In the watershed's upper region is the source for the California Department of Water Resources' State Water Project (SWP).[92] The SWP manages water conveyance and produces electricity in these waterways, while Pacific Gas and Electric (PG&E) "generates power on waterways in and above the SWP system."[93] PG&E has a monopoly on the utilities on land appropriated from Native inhabitants under its former companies.[94] "The founders of these power companies are part of the community of early timber and railroad barons—the businessmen that developed the United States and whose heirs continue to hold vast tracts of land. Railroads, Hydroelectric development, and conservation enclosures went hand in hand to displace I**** landholders, and to attempt to erase any evidence of their histories and rights."[95] Middleton Manning notes that while PG&E's project are relicensed 30-50 years, Native people are not given access to the negotiations especially if they are not recognized within a Native nation at the federal level.[96] The non-recognition of Native people, their misidentification, or denying their existence as a group of people is usually pointed out as a direct result of the work of anthropologists such as A. Kroeber. As Mishuana Goeman reminds the reader "maps produce wider realities."[97] In the twenty first century, outdated and refuted maps continue to be the basis for approaching Native homelands by

[90] Middleton Manning, 10.
[91] Middleton Manning, 4.
[92] Middleton Manning, *Upstream*. 4.
[93] Middleton Manning, *Upstream*, 5.
[94] Middleton Manning, *Upstream*, 5.
[95] Middleton Manning, *Upstream*, 5.
[96] Middleton Manning, *Upstream*, 5.
[97] Goeman, *Mark My Words*, 30.

governmental and private agencies and companies. While there are a few shifting approaches, the commonly held view of many leading enterprises is the continued devaluation of Native presence and knowledge for the *sake of national progress*, i.e., for a handful to profit from land redevelopment, resource extraction, water usage, and the aesthetics of the *natural wilderness*, to name a few.

The lemon capital of the world

In 1850 California joined the Union and became the 31st state, and in the next couple of years, some Native nations and communities in California found themselves in treaties crafted by the US Treaty Commissioners. Eight million acres of land was specified for the Native inhabitants under eighteen separate treaties. While the formation of these is flawed due to the colonial power for one, none of the eighteen treaties were approved by the US Senate and until 1905, they were set in an "injunction of secrecy."[98] The US and California's appropriation of Native homelands left many dispossessed and displaced as the settler colonial legal system permitted the distribution of their lands. The very lands noted in the treaties. One purchase in 1886 set up the community of South Riverside and soon after the South Riverside Land and Water Company was established to supply water to the new settlement. At the moment in which South Riverside was founded the citrus industry had already been growing in Riverside. In 1898, the Los Angeles Herald published an article titled "Oranges for Red Men's Bones."[99] The article states that settlers "took their [the Native's] city of the dead, plowed up the land fertilized by the bones of hundreds of In***** that had lain there for years and made the soil fruitful with oranges."[100] Sepulveda reflects that "One of the impacts of settling in California has long been the disturbance of Indian burials." By flooding the cemeteries or tilling lands for farming. A decade later, South Riverside would be incorporated within the borders of the City of Corona[101] and by 1911 it would be producing citrus (oranges, lemons, grapefruits) and go on to become the "lemon capital of the world."[102]

---

[98] Larisa K. Miller, "The Secret Treaties With California's I******," *Prologue*, Fall/Winter, Vol. 45, no. 3/4 (2013): 39, www.archives.gov/files/publications/prologue/2013/fall-winter/treaties.pdf

[99] Sepulveda, "California's Mission Projects," 163.

[100] Sepulveda, 164.

[101] City of Corona, "History of Corona," https://www.coronaca.gov/government/departments-divisions/library-recreation-services/library/heritage-room/history-of-corona

[102] Corona Heritage Park and Museum, "Heritage Park History. From Foothill Lemon Company est. 1911 to Heritage Park est. 2000," https://www.coronaheritage.org/history

During intense periods of agricultural production, the farmlands, crops, rivers, and streams were progressively polluted.[103] One of the detrimental factors in the changing ecosystem comes from the deteriorating water quality, putting at risk people, habitats, and fish, to name a few. Since the mid-twentieth century there have been growing changes in land use from agriculture to new urban, commercial, and industrial developments. Notably, land used for agricultural purposes is now down at ten percent while the urban, commercial, and industrial is at more than 30 percent, and in present day, the watershed provides for over 5 million people.[104] The California Water Plan Update 2023 (Public Review Draft) shares that California's Fourth Climate Change Assessment projects a 40 to 90 percent increase in developed lands by the end of 2100.[105] Based on growing urbanization for the "exploding population," Hundley notes that "Californians are not so much facing a water problem as a land-use problem."[106] He reflects that efficient government management of land use and water use could ameliorate California's seeming *water problem*, and warns that if these remain unchanged "there seems little hope of containing the urbanization of the countryside or assuring future generations an opportunity to enjoy whatever is left of those qualities that once made California one of the most desirable places on earth."[107] Perhaps recalling the myth of superabundance. The California Water Plan Update 2023 notes that the land use demands placed on the environment are being exacerbated by the ongoing climate collapse and with the growing development located in fire-prone areas, land use planning ought to be reconsidered urgently.[108]

While Hundley believes that government negligence is the cause of the haphazard land use and water use, I return to the argument that the colonial ideology and capitalist driven organization of the people, places, and their resources is what needs to be examined and changed. Organized abandonment needs to be examined and changed. However, there was another myth for settlers to manifest. Sepulveda's dissertation work "California's Mission Projects: The Spanish Imaginary in Riverside and Beyond," studies the desire to recall Spanish colonization as part of the American legacy. He frames the City of Riverside and its surroundings as related to the making of a "Colony for California" hinged on a

---

[103] Hundley, *The Great Thirst*, 465-466.

[104] EIP Associates, "Santa Ana Integrated Watershed Plan Volume 2,"

[105] State of California, Natural Resources Agency, Department of Water Resources, "California Water Plan Update 2023, Public Review Draft," September 2023, 2-30, https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2023/PRD/California-Water-Plan-Update-2023-Public-Review-Draft.pdf

[106] Hundley, *The Great Thirst*, 562-563.

[107] Hundley, 562-563.

[108] State of California, Natural Resources Agency, Department of Water Resources, "California Water Plan Update 2023, Public Review Draft," 2-29.

(then developing) *Spanish Imaginary*.[109] Sepulveda delineates the ways in which the City of Riverside is fundamentally built on the myth of the *Spanish Imaginary*.[110] He notes that it was proposed separately by John W. North and Dr. James P. Greeves and in 1870, the Southern California Colony Association was formed, establishing a colony named Riverside, due to its proximity to the Santa Ana River.[111] Sepulveda analyzes that:

> [T]he Spanish heritage and its mythology has become discourse that is intertwined with the history of California. It is a mythology, no longer being constructed, but has been shaped into the defining characteristic of California – it is now integral to California's history. The Spanish heritage is a colonial imaginary, written and rewritten to the point where even the historian producing a much more accurate narrative of California's history has to contend with the mythology.[112]

Writing to center Native presence, Sepulveda reminds (or informs) the reader that the region is acknowledged as the ancestral homelands of the Cahuilla people, as well as the homelands of the Tongva, Serrano, and Luiseño.[113] As an example of how "colonialism functioned in California," he shares the complex effects of the Mission period on how Native people were grouped and identified in its documentation. He notes that while Jurupet is considered a Gabrieliño village, the actual language and self-identification of the inhabitants is not conclusive because the category of Gabrieliño is a colonial formation.[114] It is a Native identity "created [after baptism] through colonialism."[115] Sepulveda gives another example, sharing that those who were

> ...baptized at San Gabriel also included more than Tongva people. Also missionized through San Gabriel, which extended its reach into the San Bernardino valley, were Serrano (Yuhaviatam) and Cahuilla. Yet, utilizing Mission records solely to understand identity would conflate both Serranos and Cahuilla, who were baptized at Mission San Gabriel, into Gabrieliño due to their affiliation with the Mission and not based on language or Indigenous tradition.[116]

By pulling the reader into the socio-cultural-linguistic-spatial transformations of the Native people in such a way, as I understand it, aspects of colonial functioning are exposed and extended to the reader as an opportunity to *contend with the mythology* themselves.

---

[109] Sepulveda, "California's Mission Projects," 142

[110] Sepulveda, 54.

[111] Charles Sepulveda, "California's Mission Projects: The Spanish Imaginary in Riverside and Beyond," PhD diss., (University of California Riverside, 2016), 292-293.

[112] Sepulveda, 30-31.

[113] Sepulveda, 171-172.

[114] Sepulveda, "California's Mission Projects,"178.

[115] Sepulveda, "California's Mission Projects," 178.

[116] Sepulveda, 178.

Sepulveda highlights another aspect he sees is "erased in the imaginary," which is institutionalized sexual violence based on gender. He depicts the formations of the monjerio—spaces in which women were incarcerated—at the Missions. The monjerio is described as a *dormitory* where unmarried baptized Native women were imprisoned to segregate them from men, "in order to keep them virginal."[117] Later in the text Sepulveda observes that it is where the priests raped the women at their want.[118] It seems to be deplorable, disease-ridden, and an isolating confine. Sepulveda points out that the attempts to remove the memory of monjerios is reflected in the reconstruction of the Missions. While the monjerios were built earlier in the construction process of the original Mission grounds, they are predominantly left out of the reconstruction projects.[119] He also notes that "historians have largely ignored the monjerio and the use of sexual violence against Indians by the Catholic Church and its enforcement of heteropatriarchal norms."[120]

In his essay later in 2018, Sepulveda draws parallels between the colonial desire to *domesticate* the Santa Ana River by damming and channeling it and to *domesticate* Native women through the monjerios. The monjerio is identified as the earliest place of imprisonment. The first prison building on the lands known as California.[121] Sepulveda states that incarceration mechanisms in California initiated under the Spanish and extended with Mexican and American rule to oppress Native people. He explains that for most of the period of colonization in California, Natives are racialized and placed low in a system of hierarchy with whiteness at the apex. This structure, he observes, is reflected in determining the "free and unfree."[122] It persists into property relations and how land continues to be circumscribed via settler colonial logics.[123] Sepulveda reminds the reader that "the Doctrine of Discovery, as primary legal justification and property law in the Americas was a racial ordering of land and property; white Christians having rights to property and In***** being limited to occupying space."[124] He emphasizes that Catholicism and Spanish colonialism compound to control Native people, their

[117] Sepulveda, 59.
[118] Sepulveda, 59-63.
[119] Sepulveda, 60. Sepulveda noting the work by Vaughn, Chelsea K. "Locating Absence: The Forgotten Presence of Monjeríos in the Alta California Missions." Southern California Quarterly 93 (2011): 141-174.
[120] Sepulveda, "California's Mission Projects,"61.
[121] Sepulveda, "Our Sacred Waters," 46.
[122] Sepulveda, "California's Mission Projects," 64.
[123] Sepulveda, 65.
[124] Sepulveda, 65.

movements, and their places.[125] Writing his dissertation in 2016 Sepulveda brings attention to the function of capitalism:

> The Mission system in California was rooted in not only colonialism and Catholicism, but the two were bound to an economy of global trade. This triad, Church, military and capitalism, was inseparable as it functioned symbiotically in an interdependent relationship. While there were disagreements between the Church and Spanish military for example, those arguments did not disconnect one from the other. Colonialism functioned through all three.[126]

It brings us to think about Goeman's reflection that colonialism is more than the conquest of Native lands and includes dominance over people—specifically, over Native women by using sexual violence—and needs a process of "colonial restructuring of spaces at a variety of scales."[127] Goeman and Gilmore both recognize the making of the colonial territories and the presence of the *warfare* state as a "gendered racial state."[128] Goeman tells us that during the twentieth century, in defiance to colonial processes marking and remarking Native spaces, Native women enacted a "literary (re)mapping of land...[unsettling] the idea of blank space waiting to be transformed."[129] Instead, imbuing a reimagining. They continually ask *why* as socio-spatial relations are reconfigured "to displace Native people and possess water and land."[130] She writes that the reimagining of these geographies by Native people "create the material consequences of everyday existence."[131] However, she contends that Native people are viewed as disappearing and fleeting, instead of recognizably "people who refuse to relinquish land and self to the forces of settler colonialism."[132]

prisons at the center of a multiscalar analysis of contemporary crisis

Leading up to the 1980s, as discussed previously through Gilmore's analysis, there were changes in land use and the farmlands used for the citrus industry along with significant other agricultural production were converted to (sub)urban use,

[125] Sepulveda, 65.
[126] Sepulveda, 68.
[127] Goeman, *Mark My Words*, 33.
[128] Gilmore, "Fatal Couplings of Power and Difference: Notes on Racism and Geography," In *Abolition Geography*, 149.
[129] Goeman, *Mark My* Words, 31.
[130] Goeman, 32.
[131] Goeman, 87.
[132] Goeman, 87.

commercial use, and to sit prisons.[133] I have framed the prison system as part of carceral logics producing carceral landscapes, and here I look at how it is accentuated as it coalesces with wildfires. The prison system in California appears through another fragment of the socio-environment and to discuss this, I return to Gilmore. In *Golden Gulag* and *Abolition Geography: Essays Towards Liberation*, Gilmore dismantles the divides propped up by land use among presumedly disconnected places in California particularly between prisons and housing developments. Gilmore makes the landscape intelligible in a way that prisons do not sit outside of environmental concerns, where land use is not fixed nor is it unrelated, or where housing developments are not disconnected from people who are made unfree via prisons. There are entire worlds to open through Gilmore's works. I have shared some aspects earlier, and here I briefly want to think with her studies to consider the fact that a fraction of California's prison population is enlisted in the fight against *wildfires*. I take a cue from Gilmore's reformulation of incarceration as a question of political-economic reconfiguration rather than one premised on the often-repeated ties of prisons and labor, as a lineage of chattel slavery. Gilmore notes that in seeing prisons as a "project of state building" instead of a "state failure," one finds that "prisons are geographical solutions to social and economic crises, politically organized by a racial state that is itself in crisis."[134]

With those made unfree and then enlisted in fighting *wildfires*, arises a specific type of relationship between where the *wildfires* are and who fights them, and an opportunity for examining social-environmental relations that produce them and are produced by them. It appears as a conjuncture. Firefighters in California sit within a complex network and are constantly being reorganized under hierarchical structures at the federal, state, and county levels. Those made unfree who fight *wildfires* are part of the Conservation Camp Program, a vocational training program running since 1945 under the California Department of Corrections and Rehabilitation.[135] For less than minimum wage they fight *wildfires* and two days are deducted from their prison sentence: a transaction known as 2-for-1. During an

[133] New York Times Archives. "Corona Foothill Purchase," New York Times, Section D, Page 10 of the National edition, 29 January 1981, https://www.nytimes.com/1981/01/29/business/corona-foothill-purchase.html. This was not a one-off case.

[134] Gilmore, "Fatal Couplings of Power and Difference: Notes on Racism and Geography," In *Abolition Geography*, 137.

[135] Conservation (Fire) Camps Program, https://www.cdcr.ca.gov/facility-locator/conservation-camps/.

emergency, they earn an extra one US dollar per hour.[136] In 2014, dissatisfied with a court decision, California opposed the 2-for-1 release credits used in other work programs, out of concern of a decrease in interest in fighting *wildfires*.[137] The program was becoming less popular with those unfree due to the potential life threat and the fact that once released, they could not be employed as firefighters due to obstructions resulting from criminal records. Although in September 2020 a bill titled AB 2147 was signed into law which enabled "a person who participates as part of a state or county fire camp would be eligible to apply for expungement upon release from custody, and if the expungement is approved could seek various career pathways including those that require a state license."[138] On the surface of it, it may seem as though this configuration is held intact by labor, that is, by the labor required to put out wildfires and the labor extracted from those unfree, but it is misleading.

Gilmore tells us that "the relationship between slavery and race, race and unfreedom, unfreedom and labor, is one that we constantly try to untangle, and at our peril we ignore it, but also at our peril we make it too simplistic, because the complexity of it matters for what we do in the current moment to undo the catastrophe of mass incarceration."[139] When examined carefully, many have found

---

[136] Nicole Goodkind, "Prison Inmates Are Fighting California's Wildfires for About $3 a Day," *Fortune*, 1 November 2019, https://fortune.com/2019/11/01/california-prisoners-fighting-wildfires/

Anabel Sosa, "California prisoners could get higher wages under new plan – but still less than $1 an hour," *Los Angeles Times*, 26 November 2023, https://www.latimes.com/california/story/2023-11-26/california-prisons-double-wages-inmates-work-labor-involuntary-servitude#:~:text=Approximately%2040%25%20of%20California's%2096%2C000,well%20as%20clerking%20and%20construction.

[137] Goodkind, "Prison Inmates Are Fighting California's Wildfires for About $3 a Day."

[138] "Governor Signs Reyes' Bill to Provide Employment Opportunities to Inmate Firefighters," September 11, 2020, https://a50.asmdc.org/press-releases/20200911-governor-signs-reyes-bill-provide-employment-opportunities-inmate

"AB 2147: Expedited expungement for former fire crew members," September 2020, https://www.cdcr.ca.gov/facility-locator/conservation-camps/fire_camp_expungement/#:~:text=Under%20AB%202147%2C%20a%20person,sentencing%20court%20for%20the%20expungement.

[139] Card, *Geographies of Racial Capitalism with Ruth Wilson*. Transcript: https://mapping.capital/wp-content/uploads/2022/04/geographies_of_racial_capitalism_with_ruth_wilson_gilmore.pdf

"California constructed 22 prisons between 1984 and 2013." Caitlin O'Neil, "The 2020-21 Budget: Effectively Managing State Prison Infrastructure." Legislative Analyst's Office, February 28, 2020, https://lao.ca.gov/reports/2020/4186/prison-infrastructure-022820.pdf, Referenced in "People's Plan for Prison Closure," April 2021, 6. CURB https://curbprisonspending.org/uploads/docs/resource-library/Peoples-Plan-for-Prison-Closure.pdf. https://criticalresistance.org/wp-content/uploads/2021/08/Peoples-Plan-for-Prison-Closure.pdf

that the 30-year prison expansion California has implemented is not one of exploited labor. Even though it is in fact racist in its structure and targets historically vulnerable groups, and while those who are incarcerated and employed are exploited, the state's reliance on incarceration is one of racial capitalism. Gilmore tells us racial capitalism is "not a thing, [it is] a relation" and as it is reproduced, "it will continue to depend on racial practice and racial hierarchy."[140] In her study of California's "prison fix," Gilmore specifically identifies surpluses that are accumulated into prisons. She points out that labor is one of the surpluses produced since the 1970s, and that these groups of people needed to be absorbed elsewhere, and the state and powerful elite place them in the system of mass incarceration via heighted policies of criminalization and legal processes and mechanisms.[141] Though it is the idled labor moved into the prisons, it is not based on the extraction of their labor.[142] As previously discussed, Gilmore explains it is time that is extracted. For example, in 2023, around forty percent of those incarcerated in California were employed.[143]

Between 1986 to 2006 the prison population within the state nearly tripled and even though prison construction was rapidly increasing initially, there were not enough prisons which lead to severe overcrowding and then expansion into other buildings.[144] In 2015, interestingly enough "California Department of Corrections (CDCR) finally came into compliance with the court-ordered population cap of 137.5 percent of design capacity. It should be noted, however, that the court-ordered cap was for CDCR as a whole, not per facility. Some facilities continue to operate at more than 137.5 percent capacity today."[145] In the 2020-2021 California Budget Governor Newsom included a plan to shut down four prisons in the state. With a sizable deficit in the state budget and the enormous hike in costs per person incarcerated at around $132,860 per year, analysts have suggested closing

---

[140] Kenton Card, *Geographies of Racial Capitalism with Ruth Wilson Gilmore*.

[141] Gilmore, *Golden Gulag*, 88.

[142] Gilmore, *Golden Gulag*, 88; "Ruth Wilson Gilmore on Abolition, the Climate Crisis and What Must Be Done."

[143] Anabel Sosa, "California prisoners could get higher wages under new plan – but still less than $1 an hour," *Los Angeles Times*, 26 November 2023, https://www.latimes.com/california/story/2023-11-26/california-prisons-double-wages-inmates-work-labor-involuntary-servitude#:~:text=Approximately%2040%25%20of%20California's%2096%2C000,well%20as%20clerking%20and%20construction.

[144] "People's Plan for Prison Closure," April 2021, 6. CURB https://curbprisonspending.org/uploads/docs/resource-library/Peoples-Plan-for-Prison-Closure.pdf. https://criticalresistance.org/wp-content/uploads/2021/08/Peoples-Plan-for-Prison-Closure.pdf

[145] "People's Plan for Prison Closure," 7.

five prisons,[146] and the Californians United for a Responsible Budget (CURB) put out a proposal for closing ten prisons in "The People's Plan for Prison Closure."[147]

A different project, Prison Policy Initiative works to bring together national and state level prison data into the public sphere to shed light on the functioning of mass incarceration. They point out that data is usually inaccessible, and it does not exist in one place. They produce research that brings together different types of data guided by the goal of visualizing the "big picture" of mass incarceration at the state and national level.[148] In a 2017 report titled "Following the Money of Mass Incarceration," the authors noted that "there are ideological as well as economic reasons for mass incarceration and over-criminalization. But at this moment, when crime is near record lows and there is increasing attention to the role of privatization in the justice system, we need a far more expansive view of how our criminal justice system works, whom it hurts, and whom it really serves."[149] For instance, they find in their research that the "criminal justice system is overwhelmingly a public system, with private prison companies acting only as extensions of the public system."[150] Their emphasis is to understand "how the criminal justice system works by identifying some of the key stakeholders and quantifying their 'stake' in the status quo."[151] Furthermore, making information accessible and usable their "visualization shows how wide and how deep mass incarceration and over-criminalization have spread into our economy."[152]

Smoke respects no political boundaries

An LA Times article from April 24, 2013, titled "Riverside County to send some inmates to work at state fire camps" places unfree people in the fight to protect homes. The article is accompanied by an image dated to a 2010 fire in Tehachapi

[146] "People's Plan for Prison Closure," 4. "The administration's own nonpartisan Legislative Analyst's Office (LAO) calculated that shutting down five adult prisons in California would save $1.5 billion per year by 2025." https://criticalresistance.org/wp-content/uploads/2021/08/Peoples-Plan-for-Prison-Closure.pdf

[147] "People's Plan for Prison Closure," 3.

[148] Peter Wagner and Bernadette Rabuy, "Following the Money of Mass Incarceration," Prison Policy Initiative, January 25, 2017, https://www.prisonpolicy.org/reports/money.html

[149] Wagner and Rabuy, "Following the Money of Mass Incarceration."

[150] Wagner and Rabuy. "The government payroll for corrections employees is over 100 times higher than the private prison industry's profits"

[151] Wagner and Rabuy.

[152] Wagner and Rabuy.

with people clad in yellow and orange suits, white helmets, and varying harnesses moving across in a line, foregrounding the towering plumes of smoke.[153]

How do the dense stacks of dark clouds carry borrowed memories, fragments, as they submerge into the blue skies and wispy whites?

The camera moves from left to right, right to left—and again—back and forth, back and forth. The moving camera. The approaching plumes of smoke. This time the smoke is closer than the *wildfire*.

On August 9, 2018, visible looking southeastward from a front yard on Viewpointe Lane in the City of Corona, the smoke traveled, as though moving in stacks, toward Riverside. Located in what is now known as the Inland Empire in Southern California, part of the unceded homelands of the Cahuilla, Acjachemen, Tongva, Kizh, and Payómkawichum peoples. Corona "is surrounded by extensive open space—including the Cleveland National Forest, Chino Hills, Corona Hills, Gavilan Hills, and Temescal Valley—all susceptible to wildfire."[154] This continues shaping its organization as a wildland-urban interface (WUI). Seen from the neighborhood enclave, the smoke traveled from a *wildfire* that started in Trabuco Canyon, east of Holy Jim Canyon in the Santa Ana Mountains. According to the U.S. Department of Agriculture's Forest Service, Trabuco Canyon was created in 1893, as one of the foremost reserves. Presently at roughly 138,971 acres, Trabuco stretches across the Riverside, Orange, and San Diego counties.[155] It sits within the Cleveland National Forest and under the Trabuco Ranger District. While some of the land is privately owned, or within the local or state responsibility areas, most of the forest is managed federally by the Forest Service, and all the land is occupied Indigenous homelands.

The smoke seen from Viewpointe Lane moving toward Riverside on August 9 was from a *wildfire* named Holy Fire and it burned 23,136 acres over almost five weeks. On each of the days between August 6 and August 15, 2018, the South Coast Air Quality Management District released a smoke advisory stating that

> Winds will be from the west/southwest today before transitioning to a southerly wind during the overnight hours. During the overnight and early morning hours, downslope winds may bring smoke into the valleys west and southwest of the fire.

---

[153] Paige St. John, "Riverside County to send some inmates to work at state fire camps," *Los Angeles Times*, April 24, 2013, https://www.latimes.com/politics/la-xpm-2013-apr-24-la-me-pc-ff-jail-prison-fire-camp-20130424-story.html

[154] City of Corona, "Corona Safety Element: Public Review Draft," December 2019, 38, https://bof.fire.ca.gov/media/9566/rpc-2-b-2-corona-safety-element_ada.pdf

[155] Trabuco Ranger District, https://www.fs.usda.gov/detail/cleveland/home/?cid=FSEPRD477258

> Overall, meteorological conditions may bring smoke into portions of Los Angeles County, Orange County, Riverside County, and San Bernardino County. Air quality may reach Unhealthy levels or higher in areas directly impacted by smoke.[156]

The South Coast Air Quality Management District (SCAQMD) regulates the air pollution for Orange, Los Angeles, Riverside and San Bernardino counties since 1976, from reconfigurations of its predecessor the Los Angeles County Air Pollution Control District set up in 1947.[157] On the SCAQMD website one finds the militarized language once more: "The war on smog began in this region more than a half century ago."[158] Looking back at its content marking its fiftieth year in 1997, the terminology was already present. The SCAQMD published a report titled "The Southland's War on Smog" in 1997 describing the efforts "of an epic war on smog that has been characterized by continual progress."[159] Polluted air was already heightened in the early 1900s but by the 1940s it grew exponentially. Some of the culprits were identified as various industrial factories, the growing number of vehicles, combustions, and burning of garbage. One of the contributors to the smog were the "Southland citrus growers" who used smudge pots to retain heat during the winter months.[160] "On a cold winter's day, when atmospheric inversions trapped pollutants low to the ground, carbon-black smoke smudged the horizon in places such as Orange County."[161] With new regulations introduced over time, the severity of smog over regions of southern California is drastically reduced. However, they still remain above the federal standards for air

---

[156] "South Coast Air Quality Management District, SCAQMD Issues Smoke Advisory Due to Holy Fire," Announcements, 2018, (last) accessed 22 February, 2022, http://www.aqmd.gov/docs/default-source/news-archive/2018/smoke-advisory-aug9-2018-holy-fire.pdf?sfvrsn=8

[157] South Coast Air Quality Management District, "What is the South Coast AQMD?" https://www.aqmd.gov/aq-spec/aboutscaqmd.

[158] South Coast Air Quality Management District, "The Job Ahead," https://www.aqmd.gov/aq-spec/aboutscaqmd#progress

Side note: They also have a term "Fugitive Dust" https://www.aqmd.gov/docs/default-source/air-quality/air-quality-monitoring-studies/fugitive-dust-source-mapping.pdf?sfvrsn=2

[159] South Coast Air Quality Management District, "The Southland's War on Smog: Fifty Years of Progress Toward Clean Air (through May 1997)," 1997, https://www.aqmd.gov/home/research/publications/50-years-of-progress#Formation%20of%20the%20South%20Coast%20Air%20Quality%20Management%20District

[160] South Coast Air Quality Management District, "Early Smog Control Efforts" In "The Southland's War on Smog: Fifty Years of Progress Toward Clean Air (through May 1997)."

Smudge pot: a container in which oil or other fuel is burned to produce a smudge (as in an orchard). Merriam-Webster Dictionary.

[161] South Coast Air Quality Management District, "Early Smog Control Efforts."

"Orchard Smudge Pots Cooked Up Pall of Smog," In "History of Air Pollution Control in Southern California," South Coast Air Quality Management District, June 1997, https://www.aqmd.gov/home/research/publications/history-of-air-pollution-control#Smudge%20Pots

quality.[162] Especially when smoke and ash from wildfires saturate the atmosphere.[163] As wildfire smoke pollutes the air, prescribed burning and cultural burning are turned toward to reduce the amount of harmful smoke.[164]

In a November 2022 document by the Legislative Analyst's Office, it is noted that while the impact of smoke from prescribed burning is not exhaustively researched, "available evidence suggests prescribed fires likely have fewer impacts."[165] These kinds of reports point to a change in perception towards smoke. The SCAQMD and California Air Resources Board have handled deciding burn and no burn days and SCAQMD, for providing burn permits. They have historically been one of the obstacles for Native fire practitioners to practice cultural burning since smoke was seen as a menace to society. However, studies using proxy data, which indicate past environmental features by findings collected from analyzing the current physical environment, are beginning to scientifically demonstrate the fallacy of such understandings of cultural burning practices.[166] Tree ring analysis, sediment core sampling, and Indigenous knowledge are highlighted as some of the methods to assemble this data. In referencing Indigenous knowledge, the report explains that "[a]ny effort to estimate historical fire emissions from oral histories and ethnographies would be specific to the site and the Tribe," as practices can vary by region, spatially, and temporally, to name a few.[167]

Nonetheless, in defining the attributes shaping how fires burn and form emissions it notes that the "mix and composition of air pollutants released by fires are influenced by several fuel-specific factors: fuel amount, fuel moisture, fuel type, whether the canopy of a forest burns, the vegetation type that produced the fuels, and whether the fire is flaming or smoldering."[168] Consequently, the

---

[162] South Coast Air Quality Management District, "The Job Ahead."

[163] "DURING A WILDFIRE – PROTECT YOURSELF," https://www.aqmd.gov/docs/default-source/publications/fact-sheets/during-wildfire-protect-yourself.pdf?sfvrsn=6

South Coast Air Quality Management District, "AFTER A WILDFIRE – SAFE CLEAN-UP," https://www.aqmd.gov/docs/default-source/publications/fact-sheets/after-wildfire-clean-up.pdf?sfvrsn=6

[164] Gabriel Petek, "Living Under Smoky Skies—Understanding the Challenges Posed by Wildfire Smoke in California," Legislative Analyst's Office, November 2022, 1. https://lao.ca.gov/Publications/Report/4644

[165] Petek, "Living Under Smoky Skies—Understanding the Challenges Posed by Wildfire Smoke in California," 10.

[166] California Air Resources Board, "Public Comment Draft California's Historical Fire Activity before Modern Fire Suppression," November 2021, 15, https://ww2.arb.ca.gov/sites/default/files/2021-11/SB901_Historical_Fire_Report_Comment_0.pdf

[167] California Air Resources Board, "Public Comment Draft California's Historical Fire Activity before Modern Fire Suppression," 6. https://ww2.arb.ca.gov/sites/default/files/classic/cc/SB901_Draft_Historical_Fire_Report.pdf

[168] California Air Resources Board, 4.

interdependent, external, spatial, temporal, social, economic parameters of places inform the density of smoke, quantity of ash, and their movement. As water moved through rivers, sediment settled, fish detected vibrations, there were a series of intertwining movements used by Natives for stewardship, use, trade, harvesting, and much more. Trails were usually created along rivers and in the most direct manner to mountain tops. Trails connected villages to other villages, and to resources, places to fish, to harvest materials...leaving deep impressions from use. Ultimately, "Well-traveled In**** trails such as the route over Pacheco Pass—linking the Salinas and San Joaquin Valleys—became horse trails, wagon roads, and, finally, highways."[169]

[169] Anderson, *Tending the Wild*, 40.

Finding Tule

"Tule (Shoenoplectus sp.), native to California is a user-friendly plant, easily recognizable and usually abundant in marshes. The first basket I made was a tule basket, and I believe that restoring this plant's quality for basketry can help revitalize the knowledge and practice of basketry for younger generations. Although I've been raised in my culture, basketry materials have mostly been given to me. This missing part of not learning how to gather basketry plants from my direct bloodline has often left me saddened, but I know that learning from others is how I help bring this knowledge back to my family. Finding tule in the wild was my first obstacle as gatherers are often sensitive of gathering places. Intertwined with this are the rules and management of public lands associated with western conservation perspectives, politics and western societal cultural norms.[1]

— Irene Vasquez, 2019

"Tule fog"

"At night, cold air drains down the sides of the Sierra Nevada to the east and the Coast Ranges to the west, facilitating the formation of a strong nocturnal temperature inversion. With little wind mixing and sufficient humidity, shallow radiation fog easily forms overnight underneath this inversion. This radiation fog is also known as tule fog after the tule grass wetlands in the region."[2]

[1] Vasquez, "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use," 14. Irene Vasquez is Mono Lake Paiute and an enrolled member of the Southern Sierra Miwuk Nation which has been "petitioning [for federal recognition] for close to forty years (since 1982)." 100.

[2] Mooney and Zavaleta, *Ecosystems of California*, 22.

Chapter 4.
Rehearsals With Fire.

In the earlier chapters, I discuss an array of social, spatial, and temporal nuances of design, planning, and fire policies that continue to shape California into the twenty first century. While they are neither complete historical accounts nor limited to a single discipline, they do refer to a constellation of relationships dictating the socio-political-environment of fire in California. *That is, the production of fire as wild via colonial myth making and the continuation of these dominant positions through capital accumulation, ongoing occupation, detrimental land use, destructive land management policies, and resource extractivism*. For most non-Natives these adverse changes in fire regimes are conspicuous through the severity and intensity of contemporary fires, but for many Natives they are discernable through the fragmented landscapes—forests, meadows, and watersheds separated by tangible and intangible boundaries—such as but not limited to nature preserves, national parks, and the wildland-urban interface. I hope I have sketched out how certain practices continue endangering all life forms. I hope the premise is clear—that parceling Indigenous homelands and watersheds into private property has proven to be perilous for Indigenous life and life ways. They are perilous to all life forms on these lands organized and reorganized via capitalist socio-economic structures. Diagramming the *problem* of *wildfires* within the settler colonial, capitalist, and carceral contexts in the previous three chapters, I now shift to how Native fire practitioners are transforming the conditions once again in revitalizing cultural burning on their homelands. These are *life-affirming* practices using fire which focus on the creative act, that is, rehearsing with fire.[1] Living with fire. The chapter expands on this activity and highlights the works of some Indigenous people, communities, and groups who have organized to (re)introduce, (re)assert, (re)apply, and extend cultural burning to their homelands while building local, regional, and transnational networks.

Rehearsals with fire develops from studies with Indigenous fire practitioners and practices (referred to as cultural burning) to navigate transformative socio-political

[1] Thinking with Goeman, Gilmore, McKittrick.

and human-environmental processes for "life to flourish."[2] The chapter looks to Native-led organizations and Native communities and scholars who inform and build praxis towards Indigenous liberation on presently occupied homelands. It follows Indigenous leadership in reasserting cultural burning on their respective homelands and the multitude of relationships that enable it. While these include processes of disabling oppressive formations and frameworks (including those that fetishize human connectivity to nature and do not center the respective Native people in their homelands: conservation, preservation, rewilding), they do so by strengthening protocols for living. The chapter sets up an understanding, for non-Natives, of cultural burning as a practice of living into the present and future. Rehearsals with fire acknowledge and recognize that Native people, communities, and nations reasserting cultural burning is a process of true decolonizing. Indigenous leadership restoring cultural practices, stewardship practices, and lifeways. Making *liberation. Making abolition geography.* Grasping that "cultural burning is not a practice that can be replicated outside its cultural context," and emphasizing that it is "embedded in cultural institutions and social processes without which the knowledge loses meaning."[3] In this sense, it is necessary for non-Native to know that as they become familiar with the workings of "where to burn, when to burn, and how to burn to produce specific results," cultural burning, is only so within its cultural context and led by Indigenous practitioners thinking across "broad spatial and temporal scales."[4] This is repeated and reiterated time and time, in various ways by members of Native communities, Indigenous practitioners, scholars, researchers, activists, artists, writers, and others across fields and roles. Fire practitioner and anthropological archaeologist Peter Nelson (Coast Miwok and tribal citizen of the Federated Indians of Graton Rancheria) points out in his work: As non-Natives "look towards Indigenous knowledge," what must be pressed upon is "...working with tribes."[5] It is essential for non-Natives not to engage in "taking tribal knowledge and using it without tribes…[as it is] a very important piece of that relationship and…those relationships are [necessary] to keep in place and to keep in mind."[6]

There are precedents, as is quite well known, of non-Native researchers and state and private employees who had little to no interest in building relationships– instead either much more in dismissing their presence or extracting Indigenous

[2] Ruth Wilson Gilmore, "Where life is precious, life is precious."

[3] Christopher Adlam, Diana Almendariz, Ron W. Goode, Deniss J. Martinez, and Beth Rose Middleton, "Keepers of the Flame: Supporting the Revitalization of Indigenous Cultural Burning," *Society & Natural Resources* (2021):7, DOI: 10.1080/08941920.2021.2006385

[4] Adlam, Almendariz, Goode, Martinez, and Middleton, "Keepers of the Flame," 7.

[5] Peter Nelson, "Fire and Indigenous Stewardship," In "Historical and Scientific Wildfire Education Workshop," City of Santa Rosa, YouTube, Published 25 May, 2021,1:03:30, https://www.youtube.com/watch?v=ZKW9i7KveRQ

[6] Nelson, "Fire and Indigenous Stewardship."

knowledges, which are more often than not tarnished with misinterpretations and misused. Some of the central figures in cultural burning in California, Frank Lake and Ron Goode along with non-Native author, Jonathan Long, write that "Indigenous peoples are rightfully concerned about potential for traditional ecological knowledge [TEK] to be extracted and used by non-Indigenous contractors or scientists in ways that do not directly advance tribal stewardship and sovereignty."[7] The authors state that, instead it would be useful to construct "longer-term experimental studies with Indigenous communities" to improve knowledge about the outcomes of stewardship practices such as cultural burning.[8] Similarly, fire practitioner and cultural ecologist at the National Park Service (NPS) Irene Vasquez (Mono Lake Paiute and enrolled member of the Southern Sierra Miwuk Nation), writes in 2019 about her own research:

> Due to earlier researchers' mining of Indigenous communities' knowledge with little if any benefit to the communities, I understand the hesitancy many tribal communities feel towards research proposals and I know the importance of gaining permission to conduct research and the associated implications of usually non-Indigenous research paradigms leading to further objectification and potential exploitation of TEK [Traditional Ecological Knowledge].[9]

With this in mind, I write to reciprocate the trust and generosity afforded to me in various ways by many people during this research. Ron Goode (North Fork Mono) is one such person. I approached him to learn about his work with cultural burning and he invited me to join a cultural burning workshop. I believe that in accepting the invitation I took on a responsibility to continue in some way. To not only think more about cultural burning but circulating what I was getting to know, extending into practice with other people. I write to share what I have learned from Indigenous leadership in cultural burning with the understanding that non-Natives must find ways to align with Native communities' goal of liberation. I write apprehending that *Native people performing cultural burning on their homelands is liberation*.

I have come to learn from Indigenous practitioners that cultural burning is an immensely rich practice in which they follow the intricate relationships among living beings. Indigenous fire practitioners are constantly making place(s). Recognizing responsibilities and embracing the interdependence necessary for living systems, all the while paying attention to the ways in which things are organized—socially, temporally, ecologically, spiritually, spatially, et cetera. Long et

[7] Long et. al., "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 14.

[8] Long et. al., 14.

[9] Vasquez, "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use," 26. https://digitalcommons.humboldt.edu/etd/282

al write that "Burning affects a tremendously wide variety of species and their interactions, including not only biomass removal but also more complex effects on air, soil, water, food webs, and parasitic and symbiotic associations."[10] Movement looms large. It is an intricate part of the practice of cultural burning. Movement of water, animals, light, people, insects, sediment, nutrients, air, fire, smoke. Movement between places. Movement as an approach for (re)organizing the socio-spatial-temporal. Movement as in investing in making, living, flourishing while shifting from death-dealing systems. *Movement as motion. path. Interconnected paths. Networks. Unimpeded flows. The ability to move freely. Access. Being used richly. Permeable. Necessary for living. Movement as activity. Active. Growing. Spreading. Movement as interdependence. Evolving. Generating. Constantly.* Movement is a central feature of cultural burning. It cannot be separated from cultural burning. Hence, appearing throughout this work. As such, cultural burning exceeds the limited relations of environmental practices of conservation, preservation, and rewilding—based on dispossession, ownership of property, unpeopling places, restricting access to places, and production and commodification in service of capitalism, or without Native people. Learning to think with cultural burning, along with other world-making practices, inspires ways to support life systems and transition people to inhabit place(s) differently. Rehearsals with fire shift focus on living safely—socially, economically, environmentally, spiritually, with medical welfare, and within healthy relations to place.

Necessarily, it also requires undoing the *legalized* means for occupation. In an essay titled "Colonization and Fire" Christine Eriksen and Don L. Hankins, write that "Colonisation introduced a new paradigm of law into indigenous cultures in many parts of the world," however "uneven in time and space."[11] Crucial here is rethinking the configuration of land demarcated by ownership. Transforming human relations to land. Some of the ways relations to land are being reformulated in California by Native people are through reclaiming access to their ancestral homelands, reasserting stewardship practices, caring for the most vulnerable in society, and proposals and processes of land back. Native people in California are doing this in different ways with varying outcomes. To better understand what this entails for non-Natives, I find Bhandar's proposal for *imagining* useful. Bhandar focuses on the need to undo the construction of "race and property ownership" for a "radically different political imaginary of

[10] Long et. al., "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 13.

[11] Christine Eriksen and Don L. Hankins, "Chapter 14: Colonisation and Fire: Gendered dimensions of indigenous fire knowledge retention and revival," In *The Routledge Handbook of Gender and Development*, e.d. A. Coles, L. Gray, and J. Momsen (Routledge, 2015), 129.

property."[12] She provides a potential protocol for imagining and transforming– which is "to understand, study, and revive the ontologies of property relations that have been suppressed by colonial techniques of dispossession and appropriation."[13] Bhandar informs the reader that a transformation of "self and our relations to one another" is crucial for the "social and political transformations" of relations with land.[14] This means transitioning out of colonial and capitalist organizations of land and land as capital which accumulates and moves wealth in the hands of a few within a closed circle (state and private entities). I understand these as rehearsals. It is what numerous Indigenous, Black, Global South, queer communities are engaged in and what many others must catch up to.

In settler colonial Canada, Leanne Betasamosake Simpson, in a series of letter exchanges with Robyn Maynard compiled as *Rehearsals for Living*, asks:

> *What if Black and Indigenous relationality refuses settler logics and centres the dismantling in a grounding of the very best practice of Indigenous and Black radical politics?*
>
> *What does it look like if we are all engaged in generating theory, organizing to the specificities of our lived experiences, but we are deeply linked in our distinctive world-building relationalities to ensure the worlds we build do not restrict, enclose or eliminate Black and Indigenous life?"*
> *What worlds do Indigenous and Black land-based politics give breath to, and how do we connect these to anti-colonial movements outside of North America and beyond?*
>
> *What does it mean to equitably share land, time, space, and the gifts of creation?*
>
> *What does this look like?*
>
> *What does it feel like?*
>
> *Can we make Indigenous and Black futurities against occupation and social death relationally responsive to each other?*[15]

Simpson continues. Reflecting on the interconnectedness of Indigenous and Black struggles. That Land Back, Black liberation, and the undoing of capitalism must be in "concert."[16] Adding "[t]his requires societies that function without policing, prisons, and property."[17]

---

[12] Bhandar, *Colonial Lives of Property*, 193.
[13] Bhandar, 193.
[14] Bhandar, 193.
[15] Maynard and Simpson, *Rehearsals For Living*, 139-140.
[16] Maynard and Simpson, *Rehearsals For Living*, 139-140.
[17] Maynard and Simpson, *Rehearsals For Living*, 200.

I understand *rehearsals with fire* as the work that Native fire practitioners do in California, and those who organize to make, do, change, shift, learn, transform in their everyday lives. It is constant—moving, producing, imagining, reimagining—"living as if"—as if (re)imagined worlds are in place.[18] *As if*—What is needed and desired is in process. Being lived out. *As if*—"life in rehearsal is its making."[19] What is needed and desired is perpetually being made and remade when people decide to live otherwise—rather than waiting, instead breaking away, to renew processes differently.[20] Gradually emerging. Place is being made in the way people know they need to be made. burgeoning. It is not a condition of a void, where things are first stripped away, rather it is a taking over by bringing in and acting out in that place. Not waiting. Not waiting until oppression is removed to then make liberation. Rather it could be putting in place liberation practices to dissipate oppression. Rehearsals with fire put into practice, in many ways, that which is good for the health of life cycles, habitats, and ecosystems, sustaining living beings now and for generations to come. *As if*—. It is in this way that I first understood what Gilmore might mean when she said and wrote "Freedom is a place."[21] It is more than opposing or an opposition. "The struggle to hold the land, to block machines of annihilation, to grow food and feed one another—this is life in rehearsal."[22] It is the activity of *life-affirming* world-making. Of *presence*.

Cultural Burning in CA

During an online talk for the City of Santa Rosa residents, Peter Nelson explained that with fire the regeneration of plants and "plant communities" transform the landscapes.[23] He described a cycle in which grasslands are infringed by shrubs, shrubs by bigger trees making "woodlands with oaks and bays and other sorts of trees," and then a conifer forest will "completely encase it in dense forest."[24] A disturbance such as fire will return these dense forests to "open patches where sunlight is let in, and you get grasslands again and that cycle starts over."[25] He notes that in the Eastern parts of California lightning is more frequent and can be a source of ignition for these disturbances, while in central California where lightning is less frequent, "fire frequency should be very low and the interval between [fires] should be very high—50 to a 100 years—of many decades before

[18] Gilmore, *Fragments of Repair/Gathering II:* "The Body's Legacies, Pt. 2: The Postcolonial Body."

[19] Gilmore.

[20] Gilmore; Maynard and Simpson, *Rehearsals For Living*, 376.

[21] Gilmore, Bhandar, and Toscano, *Abolition Geography,* 474-475.

[22] Maynard and Simpson, *Rehearsals For Living*, 376.

[23] Nelson, "Fire and Indigenous Stewardship."

[24] Nelson.

[25] Nelson.

another wildfire comes through naturally."[26] He points out that grazing has currently kept up the open grasslands and "extensive coastal prairies" in Central California, which were maintained with cultural burning in the past.[27]

The term cultural burning is subsumed by "[o]ther terms such as Indigenous fire management, Indigenous burning, and Indigenous stewardship."[28] While cultural burning is a contemporary terminology (similar to "light burning" used from the mid-twentieth century), fire practitioner and scholar Ron Goode (North Fork Mono) reminds us that Native people have "always been burning and taking care of [their] resources."[29] In "Good Fire" the authors remind us that though cultural burning has been overwhelmingly disrupted and reduced in its use with colonization, the knowledge has been cared for by fire practitioners "through applied burning, or recounted in the stories from prior generations."[30] Goode explains that fire practice is not static because "[their] culture is a living culture, always changing, always implementing new techniques, borrowing from others, from neighboring tribes, creating new patterns, new designs, new songs, always looking to improve styles and utilitarian methods."[31] Cultural burning is ceremonial fire.[32]

From collected documentation, Kat Anderson shares that fire was used in different places and varying stretches for singular bushes, trees, entire communes, or across regions and terrains. This was done to encourage sprouting and growth, as Nelson partly explained and Anderson shared, it "opened up areas to increased sunlight, heightened the structural complexity of forest, woodland, and shrubland habitats, stimulated the seed germination rates of seral and serotinous species, recycled nutrients for the whole community, altered insect populations, and promoted increased biodiversity."[33] Don Hankins (Plains Miwok, Professor CSU Chico) shares that Indigenous fire knowledge includes a "complex understanding of the environment and reading of a landscape's needs and indicators for when,

---

[26] Nelson.

[27] Nelson.

[28] Long et. al., "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 2.

[29] Ron Goode, "Revitalizing Cultural Fire Across California: A discussion with Indigenous Leaders," Moderated by Tony Marks-Block, Huntington-USC Institute on California and the West, Cal State East Bay A2E2, and C. E. Smith Museum of Anthropology, Cal State East Bay. 9 April, 2021, https://www.youtube.com/watch?v=NmFTLHx1TDo/

Panelists: Elizabeth Azzuz (Cultural Fire Management Council, Yurok), Ron Goode (North Fork Mono), Teresa Romero (Coastal Band of the Chumash Nation), Don Hankins (Plains Miwok, Professor CSU Chico), Chook-Chook Hillman (Karuk).

[30] Clark, Miller, and Hankins, "Good Fire," 1.

[31] Ron W. Goode, "The Spirituality of Culture," (2020), 3.

[32] Goode quoting Keith Turner in "The Spirituality of Culture," 1.

[33] Anderson, *Tending the* Wild, 238, 263.

where, and what type of fire should be used to achieve desired outcomes for the land."[34] He adds, "Fire is codified in the law of the land, and it has been so since time immemorial."[35] Hankins clarifies that just as the "landscapes are dynamic in relationship to environmental and cultural processes, the law itself is dynamic."[36] Building on the earlier established premise that cultural burning is rooted in social and cultural processes and institutions, Hankins explains that a "cultural practitioner understands the encoding of such knowledge in the stories of their country or more broadly across a region."[37] Garnering a personal affinity with the environment, cultural practitioners are able to recognize and identify when fire is necessary predicated on aspects related to "plant phenology, the accumulation of dead plant materials or the decline in resource conditions, soil moisture, seasonal weather patterns and other factors."[38]

In different capacities Goode and Hankins are associated with the project Keepers of the Flame (KotF), hosted at University of California Davis in collaboration with faculty and students at the Native American Studies Department (NAS). Within the project framework, Goode, Diana Almendariz, and other fire practitioners hold workshops and teach people about cultural burning, while discussing the transformative processes for its "revitalization."[39] In the project report from 2020, the (KotF) authors describe that cultural burning "appropriately highlights the foundational importance of culture in this practice."[40] Reflecting on the cultural burning workshops, they inform the reader that Native fire practitioners use their languages to express relationships with burning and "to specific plants, places and landscape features as they relate to fire."[41] Similar to what Hankins helps highlight above, as these relations change, the "cultural legacy is continuously revised and adapted."[42] Cultural burners engage in assessing how to adapt and "re-apply" their ancestral knowledge and approaches to contemporary conditions. Making it "much more than a repository of techniques or a recipe handed down unchanged for countless generations." Rather, it is "a dynamic system of land stewardship" maintained and "nourished" with continuous practice, attention, and consciousness.[43] With the revisions and reworkings of cultural burning practices, "diversity manifests in the use of different protocols by different individuals, families or tribes, as they work to balance numerous objectives, landscape and

[34] Clark, Miller, and Hankins, 2.
[35] Clark, Miller, and Hankins, 2.
[36] Clark, Miller, and Hankins, 2.
[37] Clark, Miller, and Hankins, 2.
[38] Clark, Miller, and Hankins, 2.
[39] Adlam, Almendariz, Goode, Martinez, and Middleton, "Keepers of the Flame," 8.
[40] Adlam, Almendariz, Goode, Martinez, and Middleton, 7.
[41] Adlam, Almendariz, Goode, Martinez, and Middleton, 7.
[42] Adlam, Almendariz, Goode, Martinez, and Middleton, 7.
[43] Adlam, Almendariz, Goode, Martinez, and Middleton, 7.

weather variables, and cultural obligations. Even for the same focal resource, practices can diverge."[44]

It is also the case that many traditional roles have changed and adapted since colonization. Eriksen and Hankins suggest that prior to colonization, use of fire knowledge at the landscape level was carried by men, and although women could be holders of "some fire knowledge," they were directly tied to burning practices for cultivating plants for food or basketry.[45] However, colonization disrupted these patterns. For instance, through the genocide of men, many times leaving women as holders or fire knowledge. In the Sierra Nevada foothills, Kat Anderson interviewed a North Fork Mono elder Rosalie Bethel in 1989. Bethel shared that "[b]oth men and women would set the fires," adding that she was "going by what the elders told [her] happened in the 1800s."[46] Anderson interviewed several other elders while documenting Indigenous Stewardship in California. She wrote "In aboriginal California, women were the ethnobotanists, testing, selecting, and tending much of the plant world."[47] As it is well established in the present, "women [...were] the main plant harvesters and processors [...and] instrumental in ensuring the economic survival of their cultures."[48] Anderson notes that one interviewee, J.R. [Chukchansi Yokuts/Miwok], shared that as a young boy he observed that after gathering seeds in around July, Natives across the Sierra foothills would light fires—noting that they would be set by men and watched by women in case the fires creeped towards the homes, and need to be "beaten out."[49]

Irene Vasquez stresses upon the contemporary practice of basketry by women in her research, shedding light on how essential cultural burning is for the required plant materials. Vasquez uses different types of sources in her research, and one is a "paper read to Congress in 1887" about "the temperate use of fire by the careful and wise old women."[50] The wise old women are the Native women the narrator encountered and observed in his youth.[51] Another fire practitioner affiliated with KotF, Diana Almendariz (Wintu, Nesinan, Hupa) leads cultural burns at the Tending and Gathering Garden in Yolo County, Central California, to grow plants for specific cultural uses. In Mariposa County, Goode began burning redbud because Julie Tex (Dunlop Mono) inquired about basketry material. Yoruk and Karuk

[44] Adlam, Almendariz, Goode, Martinez, and Middleton, 8.
[45] Eriksen and Hankins, "Chapter 14: Colonisation and Fire," 136.
[46] Anderson, *Tending the Wild*,152.
[47] Anderson, *Tending the Wild*, 41.
[48] Anderson, 41.
[49] Anderson, 263.
[50] Vasquez, "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use," 63. https://digitalcommons.humboldt.edu/etd/282
[51] Vasquez, 64-65. https://digitalcommons.humboldt.edu/etd/282

women, Margo Robins (Yurok) and Elizabeth Azzuz (enrolled Yurok member and a Karuk descendent) lead cultural burns on their homelands. Robins notes that what used to be called "taking care of the land, now we call it cultural burning but really it's just managing the land for living Culture."[52] Azzuz and Robins set up and continue leading a prescribed burning program gaining popularity since its start–Prescribed Fire Training Exchange (TREX)–within the Cultural Fire Management Council (CFMC).[53] TREX is a program used within the US and around the world to burn resources with established goals. (To participate certain requirements such as fitness levels must be met). In Yurok Territory, TREX is organized twice a year by CFMS. Azzuz and Robins lead these burns while sharing Yurok culture, bringing together cultural burning and prescribed burning.

Implementation of burning in space time

There are seventy documented objectives of cultural burning as briefly noted earlier quoting Native fire practitioners and scholars Frank Kanawha Lake, working in areas of the Pacific West, and Amy Cardinal Christianson in North Western Canada.[54] In a technical report from 2021, "Good Fire," of which Hankins is one of the authors, cultural burning is summarized as the "purposeful use of fire by a cultural group for a variety of purposes and outcomes."[55] The authors write that traditional law, what Hankins noted as being "codified in the law of the land," is intrinsic to the landscape and "stories that define a given culture."[56] The authors write that under these conditions of learning a certain form of relationship with fire necessarily emerges for members of Native societies. *"From the first fire story, which many Indigenous societies recount, it is an inevitable process of life. It has been handed down as a responsibility through generations, with forebears mindful of their progeny in generations to come."*[57] With these teachings continuing in Indigenous communities burning is a significant approach to "restoring ecosystems and revitalizing their cultures."[58]

---

[52] Margo Robbins, "Climate Change and Native Knowledge," In "Lookout: Envisioning Futures with Wildfire," a series hosted by the Spring Creek Project and the Environmental Arts and Humanities Initiative at Oregon State University (OSU). 18 January 2022, Published 24 January, 2024, YouTube, 51:59, https://www.youtube.com/watch?v=w5BslpWORwI. https://www.frames.gov/catalog/65199

[53] Cultural Fire Management Council (CFMC), https://www.culturalfire.org/

[54] Lake and Christianson, 714.

[55] Clark, Miller, and Hankins, "Good Fire," 3.

[56] Clark, Miller, and Hankins, 2.

[57] Clark, Miller, and Hankins, 2.

[58]Long et. al., "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 11.

As Native influence spread through non-Native community and institutional relationships, William Tripp (Karuk) and Tony Marks-Block describe that governmental institutions have "appropriated and narrowly re-conceived" cultural burning as prescribed burning.[59] Prescribed burning continues to grow in California and is a significant area of research. While cultural and prescribed burning practices could restore California's ecosystems, Clark et al also consider it a means of "repairing the fraught relationship between California, its Indigenous peoples, and stewardship of the landscape."[60] It is important to stress, as the authors of "Good Fire" make clear, the distinctions between Native practices of cultural burning from prescribed burning—based on "traditional law, objectives, outcomes and the right to burn."[61] They note that even though the state and federal entities framed cultural burning as a category of prescribed burning, these are vastly different. Cultural burning is distinguishable from prescribed burning based on who it is carried out by and for which purposes. Middleton Manning shares what she has learnt from Goode in differentiating between the two.

> ...the deep cultural basis of burning—and that could be burning specifically for basketry materials, it could be burning for medicines, it could be burning to restore a cultural space—it…always starts and ends with a prayer. Cultural burning is very relationship based. It's a place that you're caring for, that you're preparing for fire and implementing fire for particular cultural purpose and in a cultural context and then you're returning to and stewarding after the burn and preparing for the next burn. It's an ongoing relationship. It's very personal.[62]

Middleton Manning emphasizes that "cultural burning is not something that can be replicated by someone who is not part of that culture."[63] Prescribed burning is distinct from this. While it is helpful in its use, it may be led by an agency, covering large areas for several aims aligned with "[k]ind of a Western science maybe treatment perspective."[64] It could also be that the crew does not revisit the area ever again due to funding and labor limitations. Nonetheless, prescribed burning has gained a lot of traction amongst communities, cities, and agencies, while also being promoted by the state, and influencing fire policies.

Nelson has encouraged the expansion of prescribed and cultural burning in the state. He suggested that implementing these burns function as "preventative

---

[59] Marks-Block and Tripp, "Facilitating Prescribed Fire," 23.

[60] Clark, Miller, and Hankins, "Good Fire," 11.

[61] Clark, Miller, and Hankins, 2.

[62] Beth Rose Middleton Manning, "The Wildfire epidemic: Solutions from data, tech, and ancestral knowledge," Spaceship One podcast, 17 December, 2021, https://podcasters.spotify.com/pod/show/spaceship-one/episodes/The-Wildfire-Epidemic-Solutions-from-Data--Tech---Ancestral-Knowledge-part-3-e1bp819

[63] Middleton Manning, "The Wildfire epidemic."

[64] Middleton Manning. "The Wildfire epidemic."

action" against volatile wildfires and instead could keep places safe.[65] Highlighting the importance of cultural burning, Nelson shares that there are the added possibilities for Native people to "continue [Native] culture, eat…cultural food and…traditional food and have that continuing and transferring to [their] youth."[66] Native Sovereignty. Nelson opened another important aspect which is risk—an often and indiscriminately asserted concern for public safety by authorities. As numerous Native fire practitioners have pointed out, including William Tripp (Karuk), restrictions of prescribed and cultural burning perpetuate through the "institutional culture of risk aversion that developed over decades of implementing fire suppression policies, despite a low (1.76%) rate of prescribed fire escape in California."[67] Nelson describes that "…these cultural and prescribed burns can be done very safely. …Under the right conditions—with cooler temperatures at the right times of the year, with higher relative humidities—it can be done in a very controlled fashion with very minimum risk."[68] This is because cultural fire practitioners go through the entire process of preparing the land for burns and give attention to each detail. Observing and working with multiple minute aspects. Nelson shares that these conditions are monitored "all the way up to the hour of the burn to make sure that it's a successful burn."[69] The thorough process of cultural burning implemented by Native fire practitioners is acknowledged in the most recent executive bills, (intended for) removing risk and liability as obstacles for carrying out stewardship practices. It is also the first time a cultural burner has been legally defined by the state, but I will return to these bills later.

Native fire practitioners across the board emphasize differences between cultural and prescribed burns, pointing out that "cultural burns are generally preceded by extensive site preparation and followed by monitoring and additional cultural practices as part of a land stewardship tradition."[70] Distinguishing this from the agency-led prescribed burns—although these could be guided by cultural practitioners for cultural objectives—which generally focus on "reducing fuels and avoiding canopy mortality, while relying more on climatological metrics, constructed fire lines, and suppression technology."[71] Tripp and Marks-Block remind us that the "fire suppression infrastructure developed a command and control culture akin to US military campaigns, and received large financial

[65] Nelson, "Fire and Indigenous Stewardship."
[66] Nelson, "Fire and Indigenous Stewardship."
[67] Marks-Block and Tripp, "Facilitating Prescribed," 7.
[68] Nelson, "Fire and Indigenous Stewardship."
[69] Nelson. "Fire and Indigenous Stewardship."
[70] Long, Lake, and Goode, "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 3.
[71] Long, Lake, and Goode referring to Bill Tripp and Tony Marks-Block, In Long, Lake, and Goode, 3.

investments to ensure the protection of timber and residential structures."[72] Recalling chapter two, they note that "Colonial fire governance and management was bolstered by a Western science philosophy historically aligned with the timber industry that fundamentally altered and misconstrued Indigenous fire knowledge and practice in California."[73] This legacy is deeply embedded in industries and agencies within California and in the public conscience at large. Tripp and Tony Marks-Block observe that prescribed burning led by the state prioritizes securing settler colonial spaces, infrastructures, and resources considered valuable (as discussed at length in chapter three). They argue that in isolating fuel reduction as the aim of prescribed burning, not only are Native and ecological purposes sidelined but they are "compromised."[74] For instance, harming Native places, plants, trees by giving preference to revenue generating state or federal projects.[75]

In analyzing the impacts of prescribed burning multifarious studies have demonstrated that the practice "reduces the scope and intensity of future wildfires."[76] Though prescribed fire has gained acceptance even across the timber industry, "when a wildfire is perceived to threaten houses, suppression is the default (and costly) reaction. As a result, fire suppression remains embedded in federal and California state budgets, and the expansion of settlements across former California Indian lands reify a political and material commitment to suppression and settler colonialism."[77] While the ongoing impacts of prescribed burning are worthwhile, there is much more to be gained from aligning prescribed burning with cultural burning—and it requires a lot to be transformed. It requires Indigenous sovereignty and processes of land back to be centered.

With the rapid expansion of *wildfires* hastened by the "ongoing loss of habitat to continued urban and exurban development and the emergence of climate [collapse] as a growing, ubiquitous force influencing California's ecosystems," there is a growing "search for new understandings."[78] Margo Robins observed that "[t]here is too much land for the agencies to take care of. We need to put the right to use fire into the hands of people."[79] Harkening back to the vastness of the wildfires, Assembly Bill 642 mentions that: "The Legislature finds and declares that in order to meet fuel management goals, the state must rely on private entities to

[72] Marks-Block and Tripp, "Facilitating Prescribed," 1.
[73] Marks-Block and Tripp, 2.
[74] Marks-Block and Tripp, 3.
[75] Marks-Block and Tripp, "Facilitating Prescribed Fire," 3.
[76] Clark, Miller, and Hankins, "Good Fire," 1.
[77] Marks-Block and Tripp, "Facilitating Prescribed Fire," 16.
[78] Mooney and Zavaleta, *Ecosystems of California*, 3.
[79] Quoted in Marks-Block and Tripp, "Facilitating Prescribed Fire," 15. 7

engage in prescribed burning for public benefit."[80] Tripp et al extend an analysis of Robins' words, saying that it indicates the disfunction of the polarized state which "disrupted Indigenous autonomy over fire and land management, and failed to invest in its own prescribed fire infrastructure."[81] As collaborations and reconfigurations develop across federal, state, and municipal levels, it is important to recognize what is being prioritized, if there is a critical analysis of the conditions using anti-colonial, anti-capitalist, anti-racist frameworks, and if people are placed before profits. Most often, when Native people and communities are invited into collaborations for prescribed burning or every now and then, "given" opportunities for reintroducing cultural burning practices to certain areas, attention to Indigenous sovereignty is sparse.[82] With populations rising near forested areas, "defending residential communities" has taken precedence over safeguarding the timber industry.[83] The idea of protecting homes is reinforced by the Healthy Forests Restoration Act (HFRA) of 2003 and FLAME Act of 2009, which focus on boosting fuel reduction in the WUI.[84] Prescribed burning is part of the proposal, however Tripp and Marks-Block observe "treatments have not reached pre-colonial levels of fire frequency and area in California."[85]

In 2020 the USFS and Governor Newsom worked toward the project "Shared Stewardship of California's Forest and Rangelands," which is said to strengthen *California's forests* and lower the threat of wildfires.[86] Echoing earlier desires of ensuring the defense of valuable resources, this time using strategies of prescribed burning instead of fire suppression.[87] In doing so, Native Sovereignty continues to be sidelined.[88] Soon after, Governor Gavin Newsom unveiled the California Wildfire & Forest Resilience Task Force in "a response commensurate to the challenge."[89]California's Wildfire and Forest Resilience Action Plan published

[80] Senate Bill No. 332, Chapter 600, Statutes of 2021, 2021 Reg. Sess. (California, 2021).

[81] Marks-Block and Tripp, "Facilitating Prescribed Fire," 15.

[82] Marks-Block and Tripp, 4.

[83] Marks-Block and Tripp, 14.

[84] Marks-Block and Tripp, "Facilitating Prescribed Fire," 4. 7

[85] Marks-Block and Tripp, 4.

[86] "Agreement For Shared Stewardship of California's Forest and Rangelands Between the State of California and the USDA, Forest Service Pacific Southwest Region," 2020, https://www.gov.ca.gov/wp-content/uploads/2020/08/8.12.20-CA-Shared-Stewardship-MOU.pdf

[87] "California's Wildfire and Forest Resilience Action Plan," A Comprehensive Strategy of the Governor's Forest Management Task Force, January 2021, https://wildfiretaskforce.org/wp-content/uploads/2022/04/californiawildfireandforestresilienceactionplan.pdf. "Complementary partnerships at the local level through tribal governments, cities and counties, fire safe councils, regional collaboratives, resource conservation districts, and others will continue to protect our forested landscapes and at-risk communities." 5.

[88] "California's Wildfire and Forest Resilience Action Plan," 19-20.

[89] California Wildfire & Forest Resilience Task Force, "An Unprecedented Response to an Unprecedented Challenge," https://wildfiretaskforce.org/about/

in 2021, notes the necessity for cooperations across "federal, state, local and tribal entities and private organizations...for preventing catastrophic wildfires by creating healthier, more sustainable natural environments."[90] In March 2022, the Governor's Task Force published California's Strategic Plan for Expanding the Use of Beneficial Fire.[91] "Beneficial fire" is a new terminology featured in the publication as a category: "prescribed fire, cultural burning, and fire managed for resource benefit—collectively referred to as beneficial fire."[92] Indigenous stewardship is given considerably more space in these proposals however, they fall short on mentioning Indigenous sovereignty. For instance, the proposed plan states: "Recognition and expansion of ongoing cultural burning practices will also begin to rectify historic injustices and return stewardship roles to California Native communities. Colonialism, genocide, and the forced removal of Native people from their ancestral homelands significantly reduced the extent of cultural burning. Efforts are underway to return Native people to the forefront of stewardship."[93] Although members of Indigenous communities are taking over some processes of planning and decision-making, government agencies continue to wield power. The consolidation of settler colonial power continues to disable and impair Native organization of stewardship practices.[94]

Fire and water

In a text titled "Bring Back the Good Fires" Teresa Romero (enrolled member of the Coastal Band of Chumash and the Native Coast Action Network board president) and Julie Cordero-Lamb ("traditional Chumash herbalist and the founder of the Syuxtun Plant Mentorship Collective") with Jared Dhal (environmental historian and fire practitioner) discuss fire in Southern California.[95] The article follows Romero and Cordero-Lamb along with the Syuxtun Plant Mentorship Collective restoring cultural resources at the San Marcos Preserve.

[90] "California's Wildfire and Forest Resilience Action Plan," 5; California Wildfire & Forest Resilience Task Force, "An Unprecedented Response to an Unprecedented Challenge," https://wildfiretaskforce.org/about/. Describing it as "a proactive effort that is already showing progress towards long term forest health and safe, sustainable coexistence with fire."

[91] "California's Strategic Plan for Expanding the Use of Beneficial Fire," California Wildfire & Forest Resilience Task Force, March 2022, https://wildfiretaskforce.org/wp-content/uploads/2022/05/californias-strategic-plan-for-expanding-the-use-of-beneficial-fire.pdf. https://wildfiretaskforce.org/wp-content/uploads/2022/12/RXFireStrategicPlan2021_2-1.pdf

[92] "California's Strategic Plan for Expanding the Use of Beneficial Fire," 8.

[93] "California's Strategic Plan for Expanding the Use of Beneficial Fire," 6. https://wildfiretaskforce.org/wp-content/uploads/2022/12/RXFireStrategicPlan2021_2-1.pdf

[94] Marks-Block and Tripp, "Facilitating Prescribed Fire," 3.

[95] Julie Cordero-Lamb, Jared Dahl Aldern, and Teresa Romero, "Bring Back the Good Fires," *News from native California,* 31 (3), (2018); Modified and published on The ICW Blog, 2020, https://icwblog.wordpress.com/2020/10/06/bring-back-the-good-fires/

They share that even though cultural burning has been missing from the land for some time, they carry the knowledge.

> It is clear that fire is beneficial when it occurs at appropriate frequencies, scales, intensities, and severities. We know—from elders, from knowledge conveyed by songs, stories, and ceremonies, from scientific studies, and from personal, working experience—that the following burn frequencies, with the burns' acreages properly scaled, are appropriate for their respective plant communities…These burning frequencies will vary as the various plant communities intersect with each other, and fire-lighters always keep hydrology in mind: the idea is to balance the distribution of shallow-rooted grasses and annuals with shade trees and shrubs throughout the watershed so that surface water flow is maximized, groundwater is as high as possible, and plants stay as green and fire-resistant as possible.[96]

This connection of fire and water is a recurring one in the study of cultural burning. Native fire practitioners repeatedly state: *When we think about fire, we think about water.* Middleton Manning shares that "...part of cultural burning is related to raising the water table...in some of these upstream meadows, reducing the amount of vegetation which create increased fire danger."[97] Nelson points of that many people do not consider the relationship between fire and water.[98] He describes the process of bringing water from the root system to the water table when fire thins out the dense forest, provides more water for drinking and for the fish.[99] He shares what he calls a rare "an amazing event that happened" since fire was reintroduced particularly in the area of the Mount Tamalpais watershed. Between Bolinas and Stinson beach, about mid elevation he saw foot long fish in a small pool of water, he points out that "fire can help them as well."[100] Reflecting on Native stewardship practices, Hankins shared that Indigenous people of California are well aware of the "influences of their actions upon the environment."[101] They employed TEK to sustain "optimal conditions" within ecosystems to nurture "plants and animals, particularly fisheries." Hankins explains that Native communities across California may have a particularly significant cultural relationship with water, and most have traditional stories connected to water.[102] Some Native groups hold specific waters sacred, limiting access exclusively to certain members within the

[96] Cordero-Lamb, Aldern, and Romero, "Bring Back the Good Fires."
[97] Beth Rose Middleton Manning, "The Wildfire epidemic."
[98] Nelson, "Fire and Indigenous Stewardship."
[99] Nelson. "Fire and Indigenous Stewardship."
[100] Nelson, "Fire and Indigenous Stewardship."
[101] Don L. Hankins, "Water As Sacred," In "Tribal Water Stories: A Compilation of California Tribal Stories, Position Papers & Briefing Papers in Conjunction with the 2009 Tribal Water Summit," e.d Kym Trippsmith, (DWR Manager of Statewide Integrated Water Management and CA Dept. of Water Resources (DWR), California Tribal Water Summit Planning Team, 2010), 67. https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/2023/staff-report/ch11-tribal.pdf
[102] Hankins, "Water As Sacred," 67.

Native community to keep places intact.[103] Although, Native people may have lost access to these places under settler colonialism. One example comes in the form of a letter dated 27 July 2014 against the Bay Delta Conservation Plan DEIR/DEIS.[104] Hankins wrote: "As indigenous people, we hold water as sacred. It is a life giving force which all creation is connected to. For millennia we have asserted our ancestral obligation to ensure the balance and stewardship of water is maintained. Since colonization we have systematically been denied our ancestral rights; rights which by the nature of transitory resources (i.e., water, air, fish and wildlife) were never surrendered by treaty or other means."[105]

Hankins and Goode work closely with water and fire. In 2022, Goode, Beard, and Oraftik wrote that "For the Nium, or North Fork Mono, two of the most important goals of cultural burning are the return and renewal of culturally important plant and medicine species, and restoring the water table."[106] For decades Goode has worked as a watershed restorationist. In 2005, along with other Native's, Hankins and Goode were invited by the California Department of Water Resources (DWR) to initiate relations and establish the Tribal Communication Committee (TCC). There had never been an official role for Native communities in California's decision making processes regarding water before 2009, when the first TCC summit was held over two days[107] At the summit, Native speakers recognized it as a first step; shared water stories from their respective Nations; reasserted the presence of their living cultures and importance of passing these knowledges to their next generations; stressed on the need for Indigenous leadership due to the destruction of water systems under the violence of colonization and setter colonialism; prioritized environmental impacts of water and its relations in processes of restoration; insisted on the need to shift use and management of water; rejected the commodification of water; and pointed out that taking responsibility to change relations to water, would give a "larger view of how we are all connected."[108] Summit meetings took place in 2013, 2018 and 2023. However, collaborations between Native Nations and US agencies/institutions are hardly on terms and conditions dictated by Natives. Problems with sharing knowledge outside of defined respective Indigenous protocols and mistrust due

[103] Hankins, "Water As Sacred," 66-67.

[104] Don L. Hankins, Letter to Ryan Wulff, National Marine Fisheries Service, 27 July 2014, https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/CSPA%20et%20al/part2/aqua_269.pdf

[105] Hankins, Letter to Ryan Wulff.

[106] Goode, Beard, and Oraftik, "Putting Fire on the Land," 85.

[107] "Protect Our Sacred Water: 2009 California Tribal Water Summit Proceedings," California Department of Water Resources (DWR), 4 and 5 November 2009, https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2009/Tribal/Summit/2009-Tribal-Summit-Proceedings.pdf

[108] "Protect Our Sacred Water," 3.

to exploitation of Indigenous knowledge continue to exist. Native people are "hesitant to share their knowledge for fear that they will lose the rights to their data, threatening their tribal sovereignty.[109]

Knowledge systems or skewed relationship of humans' responsibility

While thinking with cultural burning, in my research, I observed that scholars across disciplines—particularly archaeology, anthropology, and ecology, for instance, do not always acknowledge Native practices of cultural burning as part of the regions fire history (in Central Valley, California, or US) and rarely at the scale at which they functioned. I recalled what Davis noted in the essay titled "Los Angeles After the Storm: The Dialectic of Ordinary Disaster," that of the many studies in climate change, seismic activity, and ecology in Southern California, few tend to consider more than the past half-century or so when in fact a better understanding is more likely to come from looking to preceding millennia. He wrote: "If there has been a single, fatal flaw in the design of Southern California as a civilization, it has been the decision to base the safety of present and future generations almost entirely upon short-sighted extrapolations from the disaster record of the last half-century."[110] Native knowledge of their homelands and the many practices they developed span centuries, and even though there are different types of evidence of these, debates persist about the existence of activities related to shaping the environment to serve specific purposes. In July 2020 Native and non-Native scholars and practitioners, Leonard et al from various fields responded to an article titled "Conservation implications of limited Native American impacts in pre-contact New England," authored by Oswald et al.[111] The article in question makes claims that prior to European arrival, Native's had modest influences on their environment. They disassociate fire practice from Native stewardship and allege that there is archaeologically scant proof of Indigenous cultivation practices. Leonard et al note:

---

[109] State Water Resources Control Board, "Tribal Engagement," In "Draft Staff Report: Sacramento/Delta Update to the Bay-Delta Plan," September 2023, 11-13.

[110] Davis, "Los Angeles After the Storm," 229.

[111] Kelsey Leonard (Shinnecock Nation), Jared Dahl Aldern, Amy Cardinal Christianson (Métis Nation of Alberta), Darren Ranco (Penobscot Nation), Casey Thornbrugh (Mashpee Wampanoag), Philip A. Loring, Michael R. Coughlan, Penelope Jones, Jason Mancini, Daniel May, Faisal Moola, Grant Williamson, Cathelijne R. Stoof, "Indigenous Conservation Practices Are Not a Monolith: Western cultural biases and a lack of engagement with Indigenous experts undermine studies of land stewardship," EcoEvoRxiv, 24 July, 2020, https://doi.org/10.32942/osf.io/jmvqy. https://ecoevorxiv.org/repository/object/4311/download/8636/

Commentary On: W. W. Oswald, D.R. Foster, B.N. Shuman, E.S. Chilton, D. L. Doucette, D.L. Duranleau, "Conservation implications of limited Native American impacts in pre-contact New England," *Nature Sustainability*, 2020, https://doi.org/10.1038/s41893-019-0466-0

> Claiming an interdisciplinary research approach, the authors conclude that fire should not be used as a land management tool today. … Unfortunately, their study lacks the historical and cultural data to meet the criteria for such strong, interdisciplinary studies. …they fail to incorporate interdisciplinary and Indigenous knowledge to meet these criteria. The article unequivocally erases Indigenous knowledge and Indigenous Peoples.[112]

In a 2013 article, "Trails, Fires, and Tribulations: Tribal Resource Management and Research Issues in Northern California," Lake explained the outcomes will vary depending on the methods and frameworks utilized in researching and attempting to understand Indigenous fire practices. That is, Western Scientific Disciplines must incorporate Native histories and cultural practices to analyze their respective fire-adapted strategies. However, this is not usually the case.[113] Based on interviews of Karuk elders (by Lake and others), Lake observed that TEK "encompasses a core area of knowledge about discrete fire events that contribute to landscape fire regimes."[114] Fire knowledges are tied to "subsistence economies, ceremonial practices, and individual or family adaptive strategies."[115] Lake suggests that TEK could shed light on the impact of the environment on fire "from the yearly to decadal scale, with generalized understanding of century-scale climate and fire regime changes."[116] Lake proposes that working across and beyond disciplines provides a broader approach and a richer understanding of the varying ways in which fire functions, be it at the local or landscape level.[117] He points out that where one discipline may be useful, another may provide better insight when incorporated, and gives the example of archaeological technology for landscape level analysis: "Landsat, LIDAR, and GIS applications are a few that offer detailed data on landscape condition."[118]

Discussing his own work with archaeogeophysics, Nelson shares that "part of [his] work is…low-impact methods of doing archaeology," since evasive techniques

---

[112] Leonard et. al., "Indigenous Conservation Practices Are Not a Monolith." https://ecoevorxiv.org/repository/object/4311/download/8636/

[113] Lake, "Trails, Fires, and Tribulations," 4. https://arcade.stanford.edu/occasion/historical-and-cultural-fires-tribal-management-and-research-issue-northern-california

[114] Lake, "Trails, Fires, and Tribulations," 4. https://arcade.stanford.edu/occasion/historical-and-cultural-fires-tribal-management-and-research-issue-northern-california

[115] Lake, "Trails, Fires, and Tribulations," 4. https://arcade.stanford.edu/occasion/historical-and-cultural-fires-tribal-management-and-research-issue-northern-california

[116] Lake, 4. https://karuktribeclimatechangeprojects.files.wordpress.com/2016/11/final-karuk-climate-assessment1.pdf

[117] Lake, 45.

[118] Lake, 15.

are "destroying history."[119] He describes that using the equipment and techniques of geologists, archaeologists can "identify cultural features with…natural geology. And there's a lot we can learn about sites - the composition, extents, and depth of sites, just by looking at these geophysical methods."[120] Nelson argues that neglecting to engage in such work leaves out "one whole data set."[121] Lake and Nelson, from distinct disciplines, have combined disciplinary approaches to demonstrate that by working with Native people and utilizing TEK, understanding of how past Native fire practices were adapted to the environment become evident and open better opportunities to strengthen "understanding of restoration in forested landscapes," for instance.[122]

Continuing his discussion on the way knowledge is produced and how it affects the current conditions of Native people, Nelson refers to a map produced by Lee Panich in the mission areas. Nelson explains the ways in which anthropologists and archaeologists have been directly of consequence in Native people's lives. He notes that Panich "shows what the impacts of colonialism have been for California in a really...distinct visual way."[123] Panich's map uses dots to mark federally recognized Indigenous groups, and a line to represent the extent of the Spanish mission areas. What is produced is a visual predominantly showing federally recognized groups outside of the areas where the Spanish missions were—with "a couple of exceptions."[124] Nelson notes that "his tribe has been one of the lucky exceptions to that rule."[125] He clarifies that this is mostly because of "anthropologists like Alfred Kroeber."[126] Contemporary anthropologists made arbitrary and misinformed claims about Indigenous people, including "saying things like...this tribe doesn't exist anymore, [or] their culture is extinct."[127] Nelson notes that Native groups were disappeared and erased from certain knowledges, pointing out that it is the effect the "legacy of that work has had on people in California."[128]

---

[119] Peter Nelson, "Indigenous Archaeology in Central California," 13 October 2014, Published on Jan 6, 2015 , by The Institute for the Study of Societal Issues (ISSI) at the University of California Berkeley, YouTube, 38:58, https://www.youtube.com/watch?v=7qNd2j_bdWg

[120] Nelson, "Indigenous Archaeology in Central California."

[121] Nelson. "Indigenous Archaeology in Central California."

[122] Long, Lake, and Goode, "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 14.

[123] Nelson, "Indigenous Archaeology in Central California."

[124] Nelson.

[125] Nelson.

[126] Nelson, "Indigenous Archaeology in Central California."

[127] Nelson.

[128] Nelson.

Emphasizing the implications of being federally recognized or unrecognized, Irene Vasquez notes that grants, scholarships, and healthcare benefits within Federal departments are for those groups who are federally recognized. Laws such as the Native American Graves Protection Reclamation Act (NAGPRA) do not require recognition. This is a significant act, and I will return to this later. Vasquez shares that Native groups who are "not recognized by the federal government" are confronted with the additional challenge of having to prove their existence as well as the traumatic legacy of the settler-colonial occupation.[129] Noting that despite the lack of acknowledgement, Native people are present and persist in sustaining relations to their homelands and practices.[130] Vasquez discusses the ramifications of prohibiting Native people from engaging in stewardship—on what is now privately and publicly owned land.[131] Vasquez is a member of the federally unrecognized Southern Sierra Miwok, and her homelands include what is now called Yosemite. She notes that the repression of Indigenous stewardship and the myth of *nature without humans*, has led to the denial of Native people, "leaving a skewed relationship of humans' responsibility and ability to live with nature sustainably."[132] Vasquez writes that by corroborating the myth of a vast *wilderness* without the activities and presence of humans—that is, the Indigenous people who have lived on these lands from time immemorial—all but assures that they are disregarded, falling outside of memory. She critically observes that separating the Indigenous people from their homelands in these ways is "used to deny territorial claims and curtail traditional management practices from the establishment of National Parks until today."[133] Vasquez underscores that while there is a shift in

> Popular thought...the perpetuation of ignoring Indigenous stewardship continues 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 a limit of taking of gathered native plants are insensitive to [Natives], whose traditional knowledge is already scrutinized. Western science and values take precedent over TEK when a limit of take is ultimately decided upon by western science. How does something remain sacred if it must be shared with bureaucrats?[134]

Besides pressuring Native communities to share protected and sensitive information, a widespread challenge for "western trained scientists" relates to the way in which TEK exists. "A lot of traditional management hasn't been written

[129] Vasquez, "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use," 13. https://digitalcommons.humboldt.edu/etd/282

[130] Vasquez, 14. https://digitalcommons.humboldt.edu/etd/282

[131] Vasquez, 22. https://digitalcommons.humboldt.edu/etd/282

[132] Vasquez, 23. https://digitalcommons.humboldt.edu/etd/282

[133] Vasquez, "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use," 22. https://digitalcommons.humboldt.edu/etd/282

[134] Vasquez, 84. https://digitalcommons.humboldt.edu/etd/282

down, for non-native folks, it's mystified and not research validated"[135] Vasquez notes that the notion of western science validating TEK with quantitative data is troubling because it undermines Native knowledge systems and points out that it is "excellent when Western science and Native science support specific goals, but when these differ, where does that leave Native science?"[136] Vasquez is critical of the arbitrary limits set on harvesting *allowance for* Natives, and that conservation policies are dictated disparately across agencies while "overwhelmingly [lacking] an appreciation for Indigenous perspectives in relation to the land and creation."[137] L.T. Smith describes that "There are numerous oral stories which tell of what it means, what it feels like, to be present while your history is erased before your eyes, dismissed as irrelevant, ignored or rendered as the lunatic ravings of drunken old people. The negation of indigenous views of history was a critical part of asserting colonial ideology, partly because such views were regarded as clearly 'primitive' and 'incorrect' and mostly because they challenged and resisted the mission of colonization."[138]

Native scientist Robin Kimmerer and Native ecologist Lake stated in 2001, what has been mentioned by Vasquez above, that this "marginalization of [Indigenous] knowledge arose partly out of ignorance and prejudice, but also because of the fragmentary nature of the evidence [...]."[139] They point to the intrinsic limitation of accepted methods and evidentiary material in Western science due to the fact that "Accounts of [Indigenous] burning are found in notes, journals, and the oral tradition. These are qualitative, anecdotal sources that are not readily accepted by Western scientists whose training is usually limited to interpretation of quantitative data." Another key factor that is overlooked is that while "Much [Indigenous] knowledge has been lost to time and forced assimilation,"[140] knowledges continue to be passed from one generation to the next via the oral tradition and remain embedded in ongoing stewardship practices—although they are "only rarely consulted as equal partners."[141] Lake, Goode, and Long identify and propose growing extended collaborations with Native communities, for instance setting up stewardship areas for fire practices to bring insight to "the potential to achieve

[135] Personal communication with E. Thorsgurad Quoted in Vasquez, 53.
"...which can be problematic for marginalized peoples whose cultures, languages and knowledge has been historically discounted." https://digitalcommons.humboldt.edu/etd/282

[136] Vasquez, 84. https://digitalcommons.humboldt.edu/etd/282

[137] Vasquez, 84. https://digitalcommons.humboldt.edu/etd/282

[138] L. T. Smith, *Decolonizing Methodologies*, 29. https://dokumen.pub/decolonizing-methodologies-research-and-indigenous-peoples-9781786998132-9781786998125-9781350225282-9781786998149.html

[139] Kimmerer and Lake, "The Role of Indigenous Burning in Land Management," 38.

[140] Kimmerer and Lake, 38.

[141] Kimmerer and Lake, 38.

ecocultural restoration objectives."[142] Like Vasquez, they also note that TEK is rooted in concepts such as "holistic, reciprocity-based philosophies," "reciprocal restoration," "caretaker responsibility, and "human services for ecosystems."[143]

Indigenous people have shared that reinstating stewardship practices "will in turn benefit the people who depend on those ecosystems."[144] Crucially they accentuate that in holding on to the framing of *value,* "measurable goods and ends may reinforce consumerism and fail to appreciate the importance of maintaining proper ways of living and the well-being of whole systems to Indigenous peoples."[145] All the work Native people have been doing since several decades has shifted certain perceptions and approaches in California, giving attention to "present-day needs and intentions that emphasize social values including the right to burn and cultural integrity, as well as material benefits and community safety."[146]

Indigenous Peoples Burning Network

I started my research in Southern California to better understand the growing threat and risk of wildfires and rather soon, it led me to learn more about where and how cultural burning occurs across California. As it turns out, because of high density and what is described as urban sprawl—development spreading outward from the city into suburbs, usually with low-density homes—Southern California, compared to the rest of the state, has been extremely restrictive in its fire practices.[147] As Stephen Pyne put it "the fire practice that mattered was suppression."[148] Government institutions and agencies continue to fear escaping cultural fires, which points to the ongoing misconceptions of the practice. Nonetheless, there are and have been places in Southern California where cultural burning has persisted (some are where Indigenous people retain parts of their homelands). In places that have not seen cultural burning practices in decades to a century, such as some Chumash homelands, Teresa Romero, Environmental Director for the Santa Ynez Band of Chumash Indians, studies fire, organizes with Chumash communities, and works with agencies to revive fire practices on the

[142] Long, Lake, and Goode, "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 3-4.

[143] Long, Lake, and Goode, 3-4, 13.

[144] Long, Lake, and Goode, 4.

[145] Long, Lake, and Goode, 3-4.

[146] Long, Lake, and Goode, 3.

[147] As it turns out, because of high density and what is described as urban sprawl—development spreading outward from the city into suburbs usually with low density homes. Jared Dahl shared this with me during our conversation at the Cultural Burning Workshop in Mariposa.

[148] Stephen Pyne, *California: A Fire Survey*, (The University of Arizona Press, 2016), 23.

respective homelands.[149] As mentioned earlier, in 2018, Romero and Julie Cordero-Lamb, along with Jared Dhal, wrote about their investment in reintroducing Indigenous Stewardship practices and specifically, "Bring[ing] Back the Good Fires." They share that at the San Marcos Preserve, Romero and Cordero-Lamb, with the Syuxtun Plant Mentorship Collective, chose pockets of land with culturally significant plants.[150] Once these areas were identified, they were to attain access permits to tend to what is known as qayas in the Šmuwič language, *Sambucus caerulea* in Latin, and blue elderberry in English.[151] However, they had to utilize time-consuming and strenuous labor techniques of "pruning, coppicing, hand-grinding, mulching, and weeding."[152] This was so because of state and county/district restrictions imposed on Indigenous communities for cultural burning practices.

Romero et al. explain that the "sheer age of healthy oaks, sycamores, bay trees, and elderberry in Southern California point to a long history of more frequent, less intense burns."[153] Pointing out that catastrophic fires, like the Thomas Fire in 2017, instead cause profuse damage to these trees. Romero expresses her interest in seeing Indigenous fire practices grow in Southern California with a network of Indigenous fire practitioners, akin to the cultural burning network expanding from northern and central California working to deepen and share fire knowledge and practices. Indigenous groups from the Klamath basin (including Karuk and Yurok people) are expanding the grassroots organization Indigenous Peoples Burning Network (IPBN) since 2015.[154] An essential part of the organization is to facilitate "autonomous family-based burning for fuel reduction and to support the revitalization of relatively small-scale fire dependent cultural practices."[155] With equipment made available by the Cultural Fire Management Council (CFMC), and families contributing to work collectively to bring back or grow cultural fire another's homelands, "this form of decentralized burning reflects traditional governance of land and fire, and is a way to assert Tribal and familial sovereignty."[156] In 2021, Tripp et al analyzed political-economic conditions of fire

[149] "Fighting Fire with Fire: Indigenous Approaches to Environmental Conservation," December 2, 2021, https://campusactivities.usc.edu/speaker-series/past-events/fighting-fire-with-fire-indigenous-approaches-to-environmental-conservation/; Environmental Office of the Santa Ynez Band of Chumash Indians, https://chumash.gov/environment; Santa Ynez Band of Chumash Indians, https://chumash.gov/

[150] Cordero-Lamb, Aldern, and Romero, "Bring Back the Good Fires."

[151] Cordero-Lamb, Aldern, and Romero.

[152] Cordero-Lamb, Aldern, and Romero.

[153] Cordero-Lamb, Aldern, and Romero.

[154] "...support from the Fire Learning Network."
Marks-Block and Tripp, "Facilitating Prescribed Fire," 14.

[155] Marks-Block and Tripp, "Facilitating Prescribed Fire," 14.

[156] Marks-Block and Tripp, 14-15.

practices and share that engaging in working this way, the IPBN exposes limits to the revitalization of cultural burning under the *racial regimes of ownership* of land, since most of Karuk and Yurok homelands are bound to USFS, NPS, and "private timber companies."[157] Lands may be entirely inaccessible or incredibly fragmented to the extent that fire practices are difficult to conduct. They looked into ways in which political configurations enable or restrict Karuk and Yurok (Northern California) efforts to outstretch prescribed burning, which are compounded with their endeavors to reinforce culture and sovereignty. After collecting and analyzing relevant data, Tripp and Marks-Block shared that decentralized organizations and work across agencies which has garnered funding and personnel, strengthen prescribed burning. Continued land dispossession, oppressive regulations, and power concentrated away from Native communities "undermine Indigenous and local fire governance."[158] They note that there is an increased and urgent need for shifting funding from personnel involved in fire suppression to apply and fulfill prescribed fire, and advice that "[w]here Tribes and local communities have established burning infrastructure, authorities should consider the devolution of decision-making and land repatriation to accelerate prescribed fire expansion."[159] They explain that Indigenous fire governance was autonomous and designated to "firesheds,"and note that as long as property and access laws continue to remain intact, Native people will be constrained in their use of fire.[160] They make the case that land back would expand Native presence on their respective homelands, which would bring about an uptick in "Indigenous access to eco-cultural resources" and reinforce decentralized cultural burning tended the by families in the community with support from the IPBN and associated organizations.[161] "Increased land access and a shift in land management objectives will contribute to Indigenous cultural revitalization."[162]

Indigenous fire practitioners have been working in different ways, some over a longer period than others, to facilitate mechanisms to make cultural burning easier for Indigenous people. Fire practitioners Lake, Goode, and Long write that "...as uncharacteristically large and severe wildfires have become more common and more disruptive to ecological and social values, including public health and cultural resources" "there is heightened interest in how Indigenous approaches to burning can integrate with broader ecosystem restoration policies and

[157] Marks-Block and Tripp, 15.
[158] Marks-Block and Tripp, 1.
[159] Marks-Block and Tripp, 1.
[160] Marks-Block and Tripp, 2.
[161] Marks-Block and Tripp, "Facilitating Prescribed Fire" 15.
[162] Marks-Block and Tripp,15.

investments."[163] The growing interest is from federal and state agencies to protect housing developments and properties from wildfires. Lake, Goode, and Long state the "Applications of the framework often emphasize services that are amenable to economic valuation."[164] However, seeking "to increase their engagement with tribes and other Indigenous organizations to support restoration, […] National forests in this region [Pacific West of the US] have initiated the process of revising their land management plans to expand the role of intentional fire, while the State of California has committed to sweeping new initiatives that include support for tribal cultural burning." [165]

Tripp and Marks-Block conduct a crucial review of the settler state's reach in stifling prescribed fire and the clout "Indigenous fire revitalization movements" have on stretching cultural and prescribed fire practices.[166] They share that reinstating prescribed burning in government agencies has been challenging since the twentieth century until today and identify the most prevalent obstacles: "a narrow burn window (political and ecoclimatic conditions that limit prescribed burning), environmental and air quality regulations, and a paucity of trained personnel to conduct burns."[167] Native fire practitioners heightened their work with a series of Native organizations to boost the use of fire in the state by setting up programs and political critiques to influence fire policy. State and federal initiatives have followed suit, while NGOs have emerged across the state.[168] Interagency partnerships between Native and state, federal, or local entities have been built up by Indigenous fire practitioners through operationalizing legal, political, and environmental structures. Even though Native governments, agencies, and communities continue to endorse, expand, and deepen cultural burning within their homelands, federal and state agencies tend to obstruct them from implementing their plans in their entirety. Access to their ancestral homelands is not guaranteed either. Funding is unreliable. Tripp and Marks-Block make another interesting observation: "officials within state and federal management agencies argue that allowing prescribed burns while wildfires burn elsewhere could create misperceptions that the government is not doing enough to protect houses and built infrastructure."[169] This is an accurate example of the US and California government's non-commitment to Indigenous sovereignty and the processes of Native stewardship.

---

[163] Long, Lake, and Goode, "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA," 1.

[164] Long, Lake, and Goode, 3.

[165] Long, Lake, and Goode, 1-2.

[166] Marks-Block and Tripp, 2.

[167] Marks-Block and Tripp, 4.

[168] Marks-Block and Tripp, "Facilitating Prescribed Fire," 4.

[169] Marks-Block and Tripp, 7.

Another collaboration is the Intertribal Indigenous Stewardship Project. During an online gathering in 2021, "Revitalizing Cultural Fire Across California: A discussion with Indigenous Leaders," Romero joined some of the fire practitioners building these spaces. The online event was hosted by Huntington-USC Institute with the project California and the West, bringing together Cal State East Bay A2E2, and C. E. Smith Museum of Anthropology, Cal State East Bay. The panelists included: "Elizabeth Azzuz (Cultural Fire Management Council, Yurok), Ron Goode (North Fork Mono), Teresa Romero (Coastal Band of the Chumash Nation), Don Hankins (Plains Miwok, Professor CSU Chico), Chook-Chook Hillman (Karuk). Moderator: Tony Marks-Block, Assistant Professor, Department of Anthropology, Geography & Environmental Studies."[170] The conversation gave insight into the work being done across Indigenous communities and the many places where these communities are extended to non-natives including agencies and universities. To shape a shift in fire perceptions and bring knowledge about the close relations of fire and lifeways for Indigenous people. In the introduction, some panelists brought up one of the main barriers to cultural burning practices on their (occupied) homelands: liability and/or liability insurance. Observing this, at one point Hankins opened a question about liability—asking the panelists to "think back…in your language...is there a term in your language for the word risk or liability?"[171] Everyone on the panel responded negatively. Goode offered that it is a responsibility, not a liability. Hillman added: "not doing cultural fire…" "...that's the liability."[172] Romero repeats in agreement that "There's greater liability in not burning than…to do what we do in a traditional way. There's a much larger liability involved."[173]

"Good Fire I" and "Good Fire II" are the most thorough examinations of the barriers Native fire practitioners confront and provide precise ways to undo harm and reconfigure relationships by reimagining the presence of beneficial fire in California.[174] Liability is discussed in detail among other barriers. Informing the reader that "concerns about liability and availability of insurance have limited burn

[170] "Revitalizing Cultural Fire Across California: A discussion with Indigenous Leaders," Moderated by Tony Marks-Block, Huntington-USC Institute on California and the West, Cal State East Bay A2E2, and C. E. Smith Museum of Anthropology, Cal State East Bay. 9 April, 2021, https://www.youtube.com/watch?v=NmFTLHx1TDo/

[171] "Revitalizing Cultural Fire Across California: A discussion with Indigenous Leaders."

[172] "Revitalizing Cultural Fire Across California: A discussion with Indigenous Leaders."

[173] "Revitalizing Cultural Fire Across California: A discussion with Indigenous Leaders."

[174] Sara A. Clark, Bill Tripp, Don Hankins, Colleen E. Rossier, Abigail Varney, and Isobel Nairn, "Good Fire II: Current Barriers to the Expansion of Cultural Burning and Prescribed Fire Use in the United States and Recommended Solutions," For The Karuk Tribe, Published March 5, 2024, Good Fire I originally published February 17, 2021, https://karuktribeclimatechangeprojects.wordpress.com/wp-content/uploads/2024/03/good-fire-ii-march-2024.pdf

size and activity."[175] The authors write that the advantages of fire use exceed the risks of possible losses and argue that in case of an escaped fire for example, responsibility should be shared as opposed to falling solely on the burner. They contend "[e]qually responsible are state and federal agencies which practiced decades of fire exclusion leading to fuels buildup and potentially lethal conditions."[176] Rather insightfully, they note that the "ignition sources are not primarily responsible for the wildfire crisis."[177] The authors note that the US should recognize its role in creating this predicament and understand the challenges that the Native fire practitioners face, suggesting that they take responsibility for the "unlikely circumstance" of an escaped fire.[178] It is important to understand the probability of an applied beneficial fire getting out of hand is miniscule:

> Escape is indeed unlikely. Studies have shown that the use of beneficial fire is typically very safe. In 2022, the Forest Service reported that 99.84% of prescribed fires go according to plan. Likewise, a meta-study from March 2020 found an escape rate of less than one percent for over 23,000 burns. Of those escaped burns, most were small, and only one resulted in an insurance claim. No lawsuits were filed as a result.[179]
>
> Fixation, however, on the small number of escaped prescribed fires ignores both the low probability of escape and the high probability of wildfire when burns are not conducted. When considering the risks of prescribed fire, it is important to note that *not* conducting a prescribed fire may leave a property more vulnerable to damage for which no person or agency is liable under current law, such as lightening ignitions.[180]

After the publication of "Good Fire I," decades of work in many aspects by Indigenous fire practitioners and scholars are reflected in the two California bills that passed in early 2022. Many of the Indigenous fire practitioners of the state collaborated in determining the working and wording of the bills. On paper, Assembly Bill No. 642 (AB 642) and Senate Bill No. 332 (SB 332) expand fire practice and reduce liability for *cultural fire practitioners*.[181] Both bills introduce and define cultural burning and "cultural fire practitioner." A lot of the language comes from discussions with collaborators of "Good Fire," they describe a cultural fire practitioner as a Native person "engaged in burning to meet cultural goals or objectives, including the enhancement of culturally important resources."[182] AB

[175] Clark, Miller, and Hankins, "Good Fire," 1.
[176] Clark, Tripp, Hankins, Rossier, Varney, and Nairn, "Good Fire II," 49.
[177] Clark, Tripp, Hankins, Rossier, Varney, and Nairn, 50.
[178] Clark, Tripp, Hankins, Rossier, Varney, and Nairn, "Good Fire II," 49.
[179] Clark, Tripp, Hankins, Rossier, Varney, and Nairn, "Good Fire II," 49.
[180] Clark, Tripp, Hankins, Rossier, Varney, and Nairn, 50.
[181] Senate Bill No. 332, Chapter 600, Statutes of 2021, 2021 Reg. Sess. (California, 2021) Assembly Bill No. 642, Chapter 375, Statutes of 2021, 2021 Reg. Sess. (California, 2021)
[182] Clark, Miller, and Hankins, "Good Fire," 3; Senate Bill No. 332; Assembly Bill No. 642

642 is more extensive in comparison and starts by noting "Wildfires in California are continuing to increase in frequency and intensity, resulting in loss of life and damage to property, infrastructure, and ecosystems."[183] The bill is constructed in support of cultural and prescribed burning and establishes a position for a "cultural burning liaison" [for prescribed burning] and expanding the dissemination of knowledge to the public of "restoring fire processes and function, and cultural burning."[184] SB 332, which "arguably made the most progress on addressing issues related to liability, in part because of the tireless advocacy of Good Fire contributors," removes liability unless determined as gross negligence.[185] This is a crucial step and at the time the bills were being brought into effect, some Indigenous fire practitioners were hopeful but remained cautious about how it may be implemented.[186]

The authors break down the problem of liability into the three categories of third parties, fire suppression, and agency, and propose a series of in-depth recommendations at state and federal levels to overcome the gaps as they see them. One point that caught most of my attention relates to smoke: "In particular, concern about liability for smoke may be particularly daunting. In recent years, prescribed burners have faced pressure from California wineries, among others, who believe that prescribed burns may contribute to smoke taint. Adopting a gross negligence standard for claims arising from smoke, as is the case in South Carolina, could relieve these concerns for prescribed burners and insurers."[187] The authors note that the regulation outlined for air quality incorrectly categorizes smoke from beneficial fires as "a pollution source similar to power plants and tailpipes, the industrial sources that the Clean Air Act was intended to regulate."[188] They argue that this decision needs to be reviewed because it infringes upon Indigenous rights, intervening in their socio-cultural-economic processes and lifeways. Furthermore, they note that the air districts in charge of processing burn permits may not be well versed in the technicalities of fire and, hence, cannot effectively approach the applications. In these ways the publication highlights

[183] Assembly Bill No. 642. "In 2020, wildfires burned more than 4.1 million acres. … The land area burned in 2020 more than doubled the previous record, roughly 1.8 million acres, which was set in 2018." https://antr.assembly.ca.gov/sites/antr.assembly.ca.gov/files/June%2020th%20Hearing%20Packet.pdf.

[184] Assembly Bill No. 642. "certification program for burn bosses"

[185] Senate Bill No. 332. https://karuktribeclimatechangeprojects.wordpress.com/wp-content/uploads/2024/04/good-fire-2-rpt_april2024.pdf. Clark, Tripp, Hankins, Rossier, Varney, and Nairn, "Good Fire II," 50.

[186] Clark, Tripp, Hankins, Rossier, Varney, and Nairn, "Good Fire II," 50.

[187] Clark, Tripp, Hankins, Rossier, Varney, and Nairn, 52.

[188] Clark, Tripp, Hankins, Rossier, Varney, and Nairn, 40.

every impediment to Indigenous fire practices and lays out a path to revolutionize approaches to beneficial fire.

While the bills begin to address some of the obstacles to prescribed and cultural burning, Clark et al share there are yet others to consider for instance, recognition of Native groups, land access, and funding to name a few.[189] Colonial approaches, patronizing government attitudes, systemic racism remain entrenched in the policies, regulations, structures of engagement, and directly opposing Native sovereignty and self-determination.[190] This includes overcoming the web of federal, state, local, and private land ownership restricting Native stewardship through denial of access to places. Legal mechanisms are not limited to appropriating Indigenous homelands but are also updated and operationalized to maintain ways of dictating use by agencies, institutions, and departments. The philosophical gap between TEK and colonial-capitalist logics employed by US entities, produce "conflicting legal frameworks between traditional law and the laws of local, state, federal, and even some Tribes create confusion surrounding the ability to burn, even where the basic tenets of self-determination are recognized within federal and state law. The issue spans beyond fundamental differences between traditional law and colonial laws, but includes unclear or conflicting language within colonial law itself."[191]

[189] Clark, Miller, and Hankins, "Good Fire," 1.
[190] Clark, Miller, and Hankins, "Good Fire," 2.
[191] Clark, Miller, and Hankins, "Good Fire," 2.
https://karuktribeclimatechangeprojects.files.wordpress.com/2016/11/final-karuk-climate-assessment1.pdf

They bend courses

Ruthie Wilson Gilmore explains that "Although most of the content in 'Meanwhile'[1] is about relatively recent occurrences, it is a historical geography of the future. In other words, the purpose isn't to document that a specific thing happened but rather to offer thickly analytical, detailed descriptions of many different ways people arrive at arranging themselves into a social force– whether in California, or Portugal, or the Black Atlantic, or North America, or South Asia. The social-spatial fights, connecting past to present, are waged by farmworkers or public sector unions, environmental justice activists or schoolchildren, long-distance migrants, care workers, households and communities, transport workers, people in prison, detention, and jail, students, sex workers, formerly and currently incarcerated people and their loved ones, Indigenous peoples fighting for true decolonization, and people who claim space by occupying land in urban and rural areas of the global south (wherever in the world that may be).[2]

–Ruth Wilson Gilmore, 2022

[1] "Meanwhile: Making Abolition Geography" is the title of the different versions of essays/talks authored by Gilmore. One such: Ruth Wilson Gilmore, "Meanwhile: Making Abolition Geographies," fifth annual Frances Tarlton "Sissy" Farenthold Endowed Lecture in Peace, Social Justice and Human Rights, The Rapoport Center and the Rothko Chapel, The University of Texas School of Law, 16 September, 2019, 1:31:33, https://law.utexas.edu/humanrights/events/fifth-annual-sissy-farenthold-lecture/

[2] Maynard and Simpson, *Rehearsals For Living*, 18-19.

Conclusion.
Living as Guests.

Indigenous cultural revitalization movements are practices of liberation making places anew, cracking through mechanisms of occupation on their homelands in California. Not only are they anti-colonial, anti-capitalist, and anti-carceral, but they "restore cultural practices grounded in worldviews of radical relationality and reciprocity with non-human species and the earth."[1] Tripp and Marks-Block make this observation by thinking through political ecology which uses a political-economic framework to study environmental governance, arguing that in the context of fire it makes the ideological basis of fire suppression visible. Tying this to the theory of settler colonialism to analyze Native communities and examine Indigenous sovereignty, they explain that this approach is used by Native scholars across the occupied homelands now called North America.[2] Operationalizing this approach, their analysis reinforces the connection between settler colonialism and racial capitalism via the accumulation of profit and a "white supremacist ideology."[3] As I have demonstrated in the previous chapters, Tripp and Marks-Block contend that the desire to remove fire in California sits tightly amongst this perspective. While mythmaking continues to confirm the colonial-capitalist fabrications.[4]

However, Indigenous movements to restore cultural burning practices are unsettling state and federal approaches, and instead, imagine "fire beyond the reduction of fuels to protect private housing."[5] This transformation can take place by turning the current socio-cultural-environmental-political structures inside out and upside down, that is, to dismantle and reconfigure processes in order to reproduce with Indigenous leadership in fire practices.[6] Tripp and Marks-Block expressly mention the necessary changes in "political economy, land use, and legal frameworks," which I see weaves together and brings into focus the movement of land back.[7] Embracing Marx's observation that capitalism is not a thing but rather a set of relations, I consider land back as a process of transforming

[1] Marks-Block and Tripp, "Facilitating Prescribed Fire," 2.
[2] Marks-Block and Tripp, 2.
[3] Marks-Block and Tripp, 2.
[4] Marks-Block and Tripp, 2.
[5] Marks-Block and Tripp, "Facilitating Prescribed Fire," 16.
[6] Marks-Block and Tripp, 16.
[7] Marks-Block and Tripp, 16.

particular sets of relations. It is clear that Indigenous fire practices cannot exist together with r*acial regimes of ownership*. I consider Bhandar's proposal to reimagine and transform oneself and, through that, relations to land and Sepulveda's proposal of "Theorizing *Kuuyam* as a Decolonial Possibility" becomes extremely fitting.[8]

In the essay "Our Sacred Waters: Theorizing *Kuuyam* as a Decolonial Possibility" Charles Sepulveda offers *Kuuyam*—the Tongva word for guests—as a way to transform the settler-Native relations on Tongva homelands.[9] I find this useful in thinking about the relations of abolition geography and land back and structure the concluding chapter through this concept. The idea of living as guests is reoccurring in Native processes of liberation and sovereignty, in describing relations to surrounding more-than-human life and non-Native people. Sepulveda writes "*Kuuyam* is an Indigenous theorization that disrupts the dialectic between Native and settler through a Tongva understanding of non-natives as potential guests of the tribal people, and more importantly—of the land itself. *Kuuyam* also disrupts the view of land and people as domesticable and instead understands place to be sacred and as having life beyond human interests."[10] Sepulveda engages in the context of Tongva homelands. Opening space for Tongva protocols to emerge. For transforming oneself as a non-Native guest on Indigenous homelands. To let the transformation be a beginning. Rehearsals in reimagining. As if in dialogue with Sepulveda's offer, I find in *Rehearsals for Living* a note: "And so, yes, to make a short story long, I agree with you, that abolition and Land Back are interlocking projects. They are transnational projects, too, in service of the liberation of earth and its peoples from the throes of capital, toward the end of all forms of captivity."[11]

Keepers of the flame[12]

[8] Sepulveda, "Our sacred waters."

[9] Sepulveda, 53-56.

[10] Sepulveda, "Our sacred waters," 41.

[11] Maynard and Simpson, *Rehearsals For Living*, 296.

[12] "Case Study: The Keepers of the Flame Project The Keepers of the Flame project is an ongoing collaboration between fire practitioners from several California Indian tribes, community organizations, and an interdisciplinary team of University of California, Davis faculty and graduate students. Tribal practitioners and their UC Davis partners were previously engaged in a range of collaborations centered on Native American Studies professor Beth Rose Middleton's participatory work on Native American environmental policy, particularly water and land tenure issues (Dolan and Middleton 2015; Middleton 2011). To Indigenous practitioners, fire management is closely interconnected with these issues (Aldern and Goode 2014; Fitzwater 2021), and interest

Keepers of the Flame transpired from a course at the Native American Studies Department (NAS) with UC Davis and was developed into a project by students and faculty in 2020.[13] During my first online meeting with Ron Goode, he encouraged me to contact the network of people behind the project. I obliged and arriving in Davis and Mariposa, I found myself in the company of a multidisciplinary group of people invested in supporting Native fire practices across the state. The project brings together students, researchers, members of the community, policy makers, and Indigenous fire practitioners into a series of formats.[14] There is the course component for students and those who wish to participate, which are led by knowledge holders who closely work with Native fire or in fire-related aspects. Another component is participating in Indigenous fire workshops. In 2022, when I joined the course and workshops, these took place at the Tending and Gathering Garden[15] and in Mariposa.

The project bridges the gaps in cultural fire knowledge amongst the non-Natives with a decolonial and decarceral approach, and supports revitalization of Indigenous fire practices.[16] Centering Indigenous sovereignty, it teaches non-Natives to follow the respective protocols Native communities have in place. To acknowledge TEK as a knowledge system in and of itself, whole and growing. It teaches non-Natives to understand what is at stake. To understand what it is the Indigenous fire practitioners, and their communities want. Encouraging non-Natives to rethink relations to places across California and Indigenous homelands. To rethink one's position and work, and if it impedes processes of Indigenous liberation or aligns. To grow methods and parameters.[17] Cultivate trust and

converged overtime on cultural burning. This project therefore came about through the interest of long-standing Tribal partners and conversations with Dr. Middleton and her graduate students over several years. Meanwhile, the growing climate and fire crisis in California further justified the need for this project in the eyes of institutional and agency partners." Adlam, Almendariz, Goode, Martinez, and Middleton, "Keepers of the Flame," 2-3.

[13] Keepers of the flame is a project funded by the Southwest Climate Adaptation Science Center (SW CASC). 2020-2023. Beth Middleton (University of California Davis). Ron Goode (North Fork Mono). Zach Emerson (Cache Creek Nature Preserve). Diana Almendariz (University of California, Davis). Christopher Adlam (University of California Davis). Deniss Martinez (University of California Davis). Melinda Adams (University of California Davis). Althea Walker (Southwest Climate Adaptation Science Center). Tamara Wall (Desert Research Institute). Alison Meadow (University of Arizona). Steven M Ostoja (USDA Climate Hub). Cultural Burning as a Climate Adaptation Strategy, https://cascprojects.org/#/project/4f8c6580e4b0546c0c397b4e/5f2d6f9482ceae4cb3c320fd

[14] Adlam, Almendariz, Goode, Martinez, and Middleton, "Keepers of the Flame," 2.

[15] Adlam, Almendariz, Goode, Martinez, and Middleton, "Keepers of the Flame," 8.

[16] Adlam, Adams, Martinez, and Middleton, "Keepers of the Flame," 2.

[17] Adlam, Almendariz, Goode, Martinez, and Middleton, "Keepers of the Flame," 12.

reciprocity.[18] To reconsider relations with fire to support Indigenous lifeways and in turn, Indigenous sovereignty.[19]

Mariposa County

Further from Tongva homelands toward Central California are the homelands of the Southern Sierra Miwuk, where Irene Vasquez has worked on safeguarding and revitalizing basketry materials in areas under the management of the NPS.[20] Gathering by Native people here has been criminalized in different ways such as by limits placed on quantities or harvesting from particular regions because of the conservationist and preservationist views. Referring to these policies, Vasquez writes that "Western science and values take precedent over TEK when a limit of take is ultimately decided upon by western science."[21] The policies are directly related to the myth of untouched wilderness. In this region the myth was specifically reinforced by John Muir. Part of the Southern Sierra Miwok homelands is what is now known as the Yosemite National Park in Central California. In the Central Valley of California, conservationist John Muir advocated for the *wildness* of Yosemite National Park. The Native name for the region is Ahwahnee.[22]

---

[18] Adlam, Adams, Martinez, and Middleton, "Keepers of the Flame," 3.

[19] Chook: "as humans, fire was not only taken away from Indigenous people, it was taken away from non-indigenous people too. And fire has been…in our grasp for millennia…and so how do people in the city...how do they rebuild this relationship, that even as Indian People, we're trying to rebuild, we're trying to learn fire again…and have a good relationship with fire—how do these other folks who are so far removed from it…interact with fire and be able to learn in a good way too?"

Don "Fire is medicine" RESPONSIBILITY, to yourself, community, to fire. TEACHING

Don "...we all can benefit from it…but we all have to be able to…approach it in the right way…

Don - intergenerational…"kids out on fire…"

Indigenous Burning Network, Indigenous Peoples Burning Network, Indigenous Fire Ecological Collaborative (IFEC), Indigenous Stewardship Network

"Revitalizing Cultural Fire Across California: A discussion with Indigenous Leaders."

[20] "Irene Vasquez works as a cultural ecologist for Yosemite National Park. She is enrolled with the Southern Sierra Miwuk Nation and grew up in Mariposa, CA. After graduating as a first generation student from UC Santa Cruz in 2009 she began working as a wilderness restoration worker seasonally for the National Park Service. In 2017, Irene became a Switzer Environmental Fellow and completed a Master of Science in Environmental Science and Natural Resource Management in 2019 from Humboldt State University." Quoted from "Tribal-Led Renewal of Black Oak Traditions for Climate Adaptation" The Southwest Climate Adaptation Science Center (SWCASC) and the NPS Tribal Engagement and Climate Change workgroup, 19 May, 2022, https://www.swcasc.arizona.edu/events/tribal-led-renewal-black-oak-traditions-climate-adaptation

[21] Vasquez, "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use, 83-84. https://digitalcommons.humboldt.edu/etd/282

[22] Vasquez, "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use, 103. https://digitalcommons.humboldt.edu/etd/282

Referred to as the "Father of the National Park Service," since the nineteenth century Muir wrote exhaustively about nature as wild, beautiful, and that which must be protected—evoking god and divinity in his writings on Yosemite.[23] In turn, much has been written about Muir and his endeavors in laying the groundwork for national parks in the US which required dispossession and displacement of Native people inhabiting the region: in this case, the Southern Sierra Miwuk whose homelands become Yosemite Park. Muir's conservationist intervention took land out of development as a reserve and took people out of the land and consciousness of settlers—as the US continued razing the last of the homes here until 1969. N. Smith considered what is touted as "...supposedly unproduced nature, such as Yellowstone Park or Yosemite" in his work on ideology and production of nature.[24] Although he discusses it in its settler colonial state, it is still relevant as he argues that these are in fact "produced environments in every conceivable sense."[25] "Human beings have produced whatever nature became accessible to them."[26] It is well established that the beauty Muir was so taken by, which he describes as wildness and untouched nature—perhaps due to a collective repressed memory, a basis for the making of the US—was cultivated from the stewardship of the Native inhabitants (of whom he was well aware).[27] A significant part of these practices is cultural burning.

For the Nium, the People, or North Fork Mono

When I initially contacted Goode, he informed me that his work relates to "fire - water - land issues and concerns" and shared some texts for me to better grasp the approach based on Nium practices and knowledge.[28] One of the three articles are titled "A Community of Relations, A Relationship of Connectedness." In this, Goode opens with a Nium story describing that "The trees were once people."[29] This Nium story was narrated by Molly Kinsman Pimona to a non-Native researcher E.W. Gifford who recorded it in the 1920s.[30] Goode writes that Nium stories are

[23] National Park Service, "Fruit Rancher, Family Man, Writer...Father of the National Park Service!" https://www.nps.gov/jomu/index.htm

[24] N. Smith, *Uneven Development*, 80.

[25] N. Smith, 80.

[26] N. Smith, 80-81.

[27] Rothman, *A Test of Adversity and Strength*, 18.

[28] Personal Communication via Zoom, 2021. Jared Aldern, "Making Space for North Fork Mono (Nium) Narrative: Land, Learning, Parataxis, Policy, and Water in Central California," Occasion: Interdisciplinary Studies in the Humanities v. 5 (March 1, 2013): http://occasion.stanford.edu/node/124. Jared Aldern has worked closely with Goode.

[29] Ron Goode, "A Community of Relations, A Relationship of Connectedness," Original 2018, Updated 2019.

[30] Goode, "A Community of Relations, A Relationship of Connectedness;" Aldern, "Making Space for North Fork Mono (Nium) Narrative," 2.

applied as tools to share knowledge with the youth, "as lessons for the young to understand the land and the nature of the species 'who' inhabited the world."[31] However, Nium stories were discriminatingly categorized as "Myths" by researchers such as Gifford at UC Berkeley.[32] Through the text, Goode didactically details the relationships "between trees and animals, the birds, insects and reptiles."[33] Tendering examples of the *community of relationships*, which he describes as ways in which "life is carried forward."[34] Goode reflects on the mushrooms and trees, writing that they "hold a unique connectedness."[35] That Indigenous people have cultivated and maintained insight into the workings of mushrooms "for thousands of years...[while] the Western Scientist has just recently come to understand about mushrooms."[36] He goes on to identify the relationship between Live Oak and Grapevine—relating that although Grapevine gathers around "willows, pines, and cottonwoods, they particularly like Live Oaks."[37] Weaved in such ways, Goode emphasizes and reminds the reader that in "ecology, a community is the way various species interact and influence each other."[38]

In another text, "The Spirituality of Culture," Goode takes the reader through the philosophy, framework, and process of cultural burning.[39] In the text he begins with the opening prayer, guiding the reader through how a possible cultural burn may unfold and ends by explaining how to close with a prayer. He relates the concept that "Cultural Burning is Ceremonial Fire."[40] Giving examples of the relationships of Nium to the surroundings—what they use and how— Goode writes that

> Understanding the spirituality of culture is simple but complex. Culture is the traditions, practices, life-ways and beliefs of a people. Culture is to "cultivate" so says my good friend Dr. Jared Aldern. ...cultivating one's life-ways is very important toward the sustainability of people's existence and their belief system. Within Indigenous cultures a reference is made to their generational traditional ecological knowledge as well as their cultural wisdom. In terms of cultivating, in-order for

[31] Goode, "A Community of Relations, A Relationship of Connectedness."
[32] Goode.
[33] Goode.
[34] Goode.
[35] Goode.
[36] Goode.
[37] Goode.
[38] Goode.
[39] Ron Goode, "The Spirituality of Culture," 2020. Jared Aldern and Ron Goode, "The stories hold water: Learning and burning in North Fork Mono homelands," *Decolonization: Indigeneity, Education & Society*, Vol. 3 (3 November, 2014): 27, https://jps.library.utoronto.ca/index.php/des/article/view/21228/18068
[40] Goode, "The Spirituality of Culture."

> traditions and knowledge to be carried forth over the millennium, old ways, ancient belief concepts and traditional practices had to integrate with new ways of planting ideas, creativity and cultural practices.[41]

He brings these ideas to life and shows their continuing relevance to revitalize Native cultural fire practices in "Burning Down to the Village."[42] Goode discusses cultural burning in Mariposa County. He shares that because of the western misconception of fire as destructive, archaeological sites are considered off limits to burning, even though they tend to be within prescribed burn plans, for example many Indigenous village sites, "exist on the Sierra National Forest."[43] He notes that while a few are recorded, "there isn't a rural, hidden or pristine spot they didn't live on."[44] Cultural fire was everywhere: "They burned in the village...and burned out and around the village...They burned close by their village sites."[45] Goode shares the experience of reintroducing cultural burning to a "major village site" close to Mariposa Creek,[46] stating that the burns revealed material conditions of the village, including "an archaeological time-line."[47] Importantly, he reflected that the revitalization of cultural resources is in practice.[48] In the making. Becoming. Reimagining worlds. Goode wrote those words in 2013 and has continued to conduct cultural burns while growing the fire network exponentially and reintroducing a plethora of cultural resources including material for basketry.[49] In 2022, he shared in a co-authored essay "Putting Fire on the Land: The Indigenous People Spoke the Language of Ecology, and Understood the Connectedness and Relationship between Land, Water, and Fire" that the Sierra Nevada mountains sees both cultural burning and prescribed burning.[50] However, they see that there is a need to continue growing the amount of cultural burning by Native people, particularly on their homelands currently categorized as state and federal lands.[51]

Jack Kirk Estate
Mariposa,[52] CA, Southern Sierra Miwok lands. February 2022

---

[41] Goode, "The Spirituality of Culture."
[42] Ron Goode, "Burning Down to the Village," May 2013.
[43] Goode, "Burning Down to the Village."
[44] Goode, "Burning Down to the Village."
[45] Goode.
[46] Goode.
[47] Goode.
[48] Goode.
[49] Aldern and Goode, "The stories hold water," 27.
[50] Goode, Beard, and Oraftik, "Putting Fire on the Land," 85.
[51] Goode, Beard, and Oraftik, "Putting Fire on the Land," 95.
[52] Anderson, *Tending the Wild*, 14.

Yosemite is located in what is now known as Mariposa County in the western foothills of the Sierra Nevada Mountains—one of the eighteen counties in California covering the Sierra Nevada's. Thirty-two miles southwest of the entrance to Yosemite and along Highway 140 is the town of Mariposa. In the middle of February 2022, I visited Mariposa. On the morning of the 19th, I arrived at the Jack Kirk Estate, homelands of the Southern Sierra Miwok, for an Indigenous Fire workshop—clad in cotton and my boots to be fire safe. It "is a site of an 8,000+ year old Miwok village" and is currently under the California Land Conservation Act of 1965 which essentially prevents urban development.[53] I was beginning to see a few of the faces I had seen behind the screens until then. Many of us started arriving the day before at different times and had already helped with the last of the prep work. After the previous day's work was completed and the sun began setting, we collected around two campfires, where some of the hosts and volunteers had prepared food for everyone already there and yet to join later that evening. More and more people were arriving and gathering around the campfires on one side of a large field. Some continued to stay and set up camp while others headed to the accommodations nearby.

It was now the following morning and soon we would all come into a circle on the same field we gathered on the previous night for an opening ceremony and prayer. As I looked around, I found that many of the 101 guests invited to the workshop had arrived. Breakfast was being prepared and eaten. People were gathering and warming themselves with coffee and heat from the pit—especially those who had camped outdoors the night before. The temperatures were low (and had been lower at night) and even still, there were smiles all around and all being reciprocated with warmth. Folks who knew each other were delighted to be brought together; groups of young college students excited to embark on the new experiences to come; and young children and pet dogs scurrying into new adventures. Soon we began to form a very, very, very large circle.

The workshop was to be led by Chairman Ron Goode of the North Fork Mono. Goode has been organizing cultural burning workshops and training in the region for over fifteen years. Directly or indirectly, he invited everyone and conducted a prayer circle with other elders, relatives, and friends. Everyone was welcomed—those who knew each other for a long time and worked together, who met each other recently, and newcomers. Goode and the elders began the ceremony. Stories were shared about the place we gathered; healing was centered for people, plants, environments; "Elders shared about song-sharing protocol;" and then songs were sung—by those whose homelands we were on, whose were close,

[53] Adlam, Adams, Martinez, and Middleton, "Keepers of the Flame," 7.

and even those who were far from their Native homelands.[54] We went around the circle while each person introduced themselves and shared what brought them there—Ron would add how he knew people. It took quite some time, but it was a beautiful way to be in a gathering. To become familiar with those whom we would work alongside for a few days. Invited were "practitioners from several tribes including Mono, Tongva, Wintu, Maidu, and Miwok, and multiple educational institutions, including CSU Sonoma, University of Montana, UC Merced, CSU Fresno, and UC Berkeley, in addition to UCD, and many agencies, including Natural Resources Conservation Service, US Forest Service, California Department of Water Resources, California Natural Resources Agency, and CalFire."[55] Going through the introductions, it quickly became apparent the immense relationships Ron, other elders, and other Native fire practitioners have been developing across California in different capacities to reintroduce cultural burning.

Goode and his team have regularly conducted different configurations of cultural burning workshops in Mariposa County, reintroducing fire through cultural burning across various scales. Redbud; creek restoration; meadow-forest relationship. "Ron's family's care, including burning, has ensured an abundant supply of redbud and sourberry shoots for basketweavers as well as sourberries, manzanita berries, acorns and other foods."[56] During the circle, Ron, Dirk, and the other elders asked us to be observant, to watch and listen. They suggested that instead of posing a string of questions that we came with, to begin with listening to the people in the place we were and observing our surroundings. They suggested that later we could engage in questions if they were any… if we desired. I recalled part of the essay I had read a few months prior to the workshop, "The stories hold water: Learning and burning in North Fork Mono homelands" in which Goode and Aldern write: "We aim to bring people to stand among the landforms, to immerse themselves in the waters-sometimes literally...at other times, figuratively in that storytelling can prompt a listener to envision places in great detail."[57]

With that advice we left to begin work for the day. There were five allocated work areas, each led by a member of Ron's team. I returned to the creek where I had been the day before. "In addition to the burns, one team worked on creek restoration by moving logs onto the edge of the creek to prevent erosion. Overall,

[54] Deniss J. Martinez, Nina Fontana, Melinda M. Adams, Beth Rose Middleton Manning, "Keepers of the Flame," Winter 2022 Report, 2.

[55] Martinez, Fontana, Adams, Middleton Manning, "Keepers of the Flame," 2022, 2.

[56] Adlam, Adams, Martinez, and Middleton, "Keepers of the Flame," 2. https://epm.ucdavis.edu/sites/g/files/dgvnsk296/files/inline-files/Keepers%20of%20the%20Flame%20Final5.12.2020.pdf.

[57] Aldern and Goode, "The stories hold water," 27.

important basketry plants such as redbud and sourberry were burned and all the burns during the workshop were successful."[58] We continued some work on the creek and later moved up to the meadow to clear the area of damaged trees, shrinking the large canopies and beginning a pile burn. In the number of square meters between the creek and the fire our group had started to clear pathways from the meadow, I worked with (Native and non-native) anthropologists, ecologists, a landscape architect, environmental scientists, county officials, a long-time employee of CalFIRE, and other fire practitioners. Some of them were well acquainted with each other. They all could understand each other's motivation for being there, in relation to their fields, but somehow did not quite know what I was doing there with my background in architecture. They were curious because it was not quite fitting for them. I know there are wide gaps in the architectural profession in California but the extent of the profession's perceived distance from cultural burning/stewardship practices surprised me. It points to the disconnect between dominant practices of architecture and the realm of fire in California. It reaffirms the idea that architectural designers must break out of the *bubbles*, and allow themselves to be transformed in the processes of world-making practices surrounding them.

One of the team guides informed me that he worked as a planning developer for the county and was intrigued by my interest in cultural burning from the field of architecture. He saw it as a useful and necessary step on the part of designers. He shared with me that design practitioners that he had come into contact with were seldom educated about cultural burning, prescribed burning, and at times they were not familiar with the presence of the Native Nations, communities, people or whose homelands they were on. However, there were at times a person or two within the design and architectural office educated about cultural burning or fire practices. At other times the county would have to bring design offices up to speed on fire practices.

As I tried to listen, observe, and process the massive amounts of information and knowledge shared and cultivated at the workshop, I was even more interested in continuing to learn about fire. Simultaneously, there was a feeling of appreciating presence within the workshop. Each evening after I left, I tried to recap and understand. I continued to think about cultural burning as a way of writing the world …and of thinking geography to understand design.[59]

[58] Martinez, Fontana, Adams, Middleton Manning, "Keepers of the Flame," 2022, 1.
[59] Ruth Wilson Gilmore (Zoom Review), TU Wien, 27 May, 2021.

The way fire loves grass: trails, movement

Cultural burning requires thinking beyond and across various scales, simultaneously at times. It develops relations among redbud and other plants, soil, ash; creeks and rivers; meadow and forest, trails, places for safe living, water, sustenance, and much more. Learning to think with cultural burning, instead of practices of conservation and preservation which are based on dispossession, unpeopling place or restricting place, and productivity in service of capitalism. Cultural burning enables a transition to safely inhabit places. I understand it as movement. Flow. circulation. repetition. Layers, patterns. Intervals. Forms. Networks. Moving across material. It brings different types of movement. Moving across matter, supporting and encouraging living.

"Nium stories describe the three-dimensional contours of the land and the dynamic movements and flows of sky and waters."[60] The people moved along an intricate network of trails spanning from the current town of North Fork towards the Pacific coast. Goode and Aldren share that the Nium lived "along trails that interlace across the western slope of the Sierra Nevada, from the mountains' crest to the Central Valley floor, in the extensive, hydrologically intricate, granitic watershed of the San Joaquin River."[61] The authors suggest that these could be "better envisioned as intertwining corridors...undulated up, down, and across the foothills and higher elevations of the Sierra, interconnecting specific areas." Goode and Aldern give a detailed description of the movement of Nium across the series of trails, refuting the idea that Nium did not have permanent settlements—some families relocated during different periods but certainly not all. They elaborate on the types of movements the trails were used for, sharing that the Nium traversed these trails to harvest food and material resources, apply fire, trade, and gather at sacred sites, to name just a few.[62]

Lake often reflects on trails. He relates that humans apply fire to establish ways to connect to resources. Linking one place to another, families to communities. In California, for thousands of years, trails traced the coast to the alpine regions, weaving across patterns of habitats, communities, and fire regimes. Along waterways and ridges. Separating fire-adapted vegetation and watersheds. He shares that other than the village sites—on top of which are US developments today—along the trails is where the early fires would have been.[63] Lake notes that even though the areas along the trails were and are valuable to Native communities, they are subsumed into land managed by state or federal agencies.

[60] Aldern and Goode, "The stories hold water," 34.
[61] Aldern and Goode, 30.
[62] Aldern and Goode, 34.
[63] Lake, "Trails, Fires, and Tribulations," 21.

He observes that these "landscape-scale trail systems" are not registered or recognized in western produced knowledge and consequently are not considered in agency planning.[64] These same trails which connected people and places would be used first by explorers and then colonizers to destroy Native spaces, worlds, and lives. The trails have since been readapted and continue to be used as roads. Lake suggests that Indigenous communities ought to reclaim these trails to cultivate a "reconnection to place," and reconceive its socio-cultural-economic presence through TEK.[65] I write to cultivate this shift. To bring to design ways of studying with the movement of good fire. Remaking worlds and relations with radical generosity, as in, rehearsals in liberating each and everyone.

[64] Lake, 22.
[65] Lake, 20.

Bibliography

2022 California Administrative Code, California Building Code, Title 24, Part 2. (Volumes 1 & 2). (International Code Council, 2022). Effective dates January 1, 2023. Accessed 24 February, 2024. https://www.library.ca.gov/law/building-standards/

Adlam, Christopher, Diana Almendariz, Ron W. Goode, Deniss J. Martinez, and Beth Rose Middleton. "Keepers of the Flame: Supporting the Revitalization of Indigenous Cultural Burning." *Society & Natural Resources* (2021): 575-590. DOI:10.1080/08941920.2021.2006385.

Adlam, Christopher, Melinda Adams, Deniss Martinez, Beth Rose Middleton. "Keepers of the Flame: Native American cultural burning in California." Winter 2020 Report. 2020. Accessed 13 June, 2021. https://epm.ucdavis.edu/sites/g/files/dgvnsk296/files/inline-files/Keepers%20of%20the%20Flame%20Final5.12.2020.pdf.

Aldern, Jared and Ron Goode. "The stories hold water: Learning and burning in North Fork Mono homelands." *Decolonization: Indigeneity, Education & Society*, Vol. 3 (3 November, 2014): 26-51. Accessed 8 July, 2021. https://jps.library.utoronto.ca/index.php/des/article/view/21228/18068

Aldern, Jared. "Making Space for North Fork Mono (Nium) Narrative: Land, Learning, Parataxis, Policy, and Water in Central California." *Occasion: Interdisciplinary Studies in the Humanities* v. 5 (March 1, 2013): Accessed 7 November, 2021. http://occasion.stanford.edu/node/124. Modified. https://shc.stanford.edu/sites/default/files/2013-02/OCCASION_v05i01_Aldern_040714.pdf

Anderson, M. Kat. *Tending the Wild: Native American Knowledge and Management of California's Natural Resources*. University of California Press, 2005.

Anguelovski, Isabelle, Linda Shi, Eric Chu, Daniel Gallagher, Kian Goh, Zachary Lamb, Kara Reeve, and Hannah Teicher. "Equity Impacts of Urban Land Use Planning for Climate Adaptation: Critical Perspectives from the Global North and South." *Journal of Planning Education and Research*, 36(3) (2016): 333-348. Accessed 9 August, 2021. https://doi.org/10.1177/0739456X16645166

Archibald, Jo-Ann, Jenny Lee-Morgan, and Jason De Santolo. *Decolonizing Research: Indigenous Storywork as Methodology*. Zed, 2019.

Assembly Majority Leader: Eloise Gómez Reyes. "Governor Signs Reyes' Bill to Provide Employment Opportunities to Inmate Firefighters." 11 September, 2020. Accessed 5 March, 2021. https://a50.asmdc.org/press-releases/20200911-governor-signs-reyes-bill-provide-employment-opportunities-inmate

Azoulay, Ariella Aïsha. *Potential History: Unlearning Imperialism*. Verso, 2019.

Bhandar, Brenna, and Rafeef Ziadah. *Revolutionary Feminisms: Conversations on Collective Action and Radical Thought*. Verso, 2020.
Bhandar, Brenna. *Colonial Lives of Property: Law, Land, and Racial Regimes of Ownership*. Duke University Press, 2018.
Blumm, M. C. and A.B. Erickson. "Federal Wild Lands Policy in the Twenty-First Century: What a Long, Strange Trip It's Been." *Colorado Natural Resources, Energy and Environmental Law Review* 1, 25. (2014). Accessed 13 June, 2020. https://www.colorado.edu/law/sites/default/files/Blumm%20&%20Erickson%20Federal%20Wild%20Lands%2025.1.pdf
Braz, Rose and Craig Gilmore. "Joining Forces: Prisons and Environmental Justice in Recent California Organizing." *Radical History Review*, Issue 96: (2006): 95–111. Accessed 10 May, 2021. DOI: 10.1215/01636545-2006-006
Byner, Nelson. "Building Codes and Standards for New Construction." *In Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*. Edited by Samuel L. Manzello (Springer, 2020). Accessed 8 January 2021. https://doi.org/10.1007/978-3-319-51727-8_69-1
California Air Resources Board. "Public Comment Draft California's Historical Fire Activity before Modern Fire Suppression." November 2021. Accessed 5 December 2021. https://ww2.arb.ca.gov/sites/default/files/2021-11/SB901_Historical_Fire_Report_Comment_0.pdf
California Department of Corrections and Rehabilitation (CDCR). "Conservation (Fire) Camps Program." Accessed 10 October, 2021. https://www.cdcr.ca.gov/facility-locator/conservation-camps/
California Department of Corrections and Rehabilitation (CDCR). "AB 2147: Expedited expungement for former fire crew members." September 2020. Accessed 11 October, 2020. https://www.cdcr.ca.gov/facility-locator/conservation-camps/fire_camp_expungement/#:~:text=Under%20AB%202147%2C%20a%20person,sentencing%20court%20for%20the%20expungement.
California Department of Forestry and Fire Protection (Cal Fire). "Defensible Space." Modified. Accessed 21 August, 2024. https://readyforwildfire.org/prepare-for-wildfire/defensible-space/
California Department of Forestry and Fire Protection (CAL FIRE). "California Wildfire Mitigation Program (CWMP) Home Hardening Retrofit Financial Assistance." Accessed 1 June, 2023 https://osfm.fire.ca.gov/committees/california-wildfire-mitigation-program
California Department of Forestry and Fire Protection (Cal Fire). "Environment/Fire_Severity_Zones." Accessed 16 July, 2023. https://services.gis.ca.gov/arcgis/rest/services/Environment/Fire_Severity_Zones/MapServer#:~:text=Description%3A%20Public%20Resources%20Code%204201,fuels%2C%20terrain%2C%20and%20weather. Update: FHSZ in State Responsibility Area effective April 1, 2024, https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/. Modified. Accessed 21 August, 2024. https://calfire-forestry.maps.arcgis.com/home/item.html?id=ac8ed44d76ed4988bceb07d35d80f4cb#overview

California Department of Forestry and Fire Protection (Cal Fire)."Partnering Agencies." Accessed 8 August, 2022. https://www.readyforwildfire.org/more/cal-fire-partners/ Updated web page. Accessed 21 August, 2024. https://readyforwildfire.org/cal-fire-partners/
California Department of Forestry and Fire Protection (CalFire)."Wildfire Resilience." Accessed 28 August, 2024. https://www.fire.ca.gov/what-we-do/natural-resource-management/wildfire-resilience
California Department of Forestry and Fire Protection Office of the State Fire Marshal. "Wildfire Activity Report," Redbook. 2020. Accessed 12 April, 2022. https://www.fire.ca.gov/media/0fdfj2h1/2020_redbook_final.pdf
California Department of Forestry and Fire Protection. "State Responsibility Areas." Accessed 2 July, 2021. Data last modified May 1, 2024. https://gis.data.ca.gov/datasets/CALFIRE-Forestry::state-responsibility-areas/about
California Department of Water Resources (DWR). "Protect Our Sacred Water: 2009 California Tribal Water Summit Proceedings." 4 and 5 November, 2009. Accessed 16 April 2020. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2009/Tribal/Summit/2009-Tribal-Summit-Proceedings.pdf
California Fire Safe Council (CFSC). Accessed 12 February 2023. https://cafiresafecouncil.org/
California Fire Science Consortium, JFSP Fire Science Exchange Network. "Legacy of Harold Biswell: Prescribed Fire Mitigation in SoCal." (Archive video). May 1983. Accessed 9 December, 2021. https://www.cafirescience.org/research-publications-source/category/biswelllegacy?rq=legacy%2C%20biswell
California Fire Science Consortium. "Wildland-Urban Interface (WUI)." Accessed 2 May, 2020. https://www.cafiresci.org/wui-ca
California Fire Science Consortium. "Wildland-Urban Interface (WUI)." Accessed 2 May, 2020. https://www.cafirescience.org/research-publications-source/?tag=Wildland-Urban+Interface+%28WUI%29
California Governor's Office of Emergency Services (Cal OES). "California Wildfire Mitigation Program." Accessed 2 May 2023. https://www.caloes.ca.gov/office-of-the-director/operations/recovery-directorate/hazard-mitigation/california-wildfire-mitigation-program/
California Legislative Information. "Assembly Bill No. 2147, Chapter 60, Statutes of 2020, 2020 Reg. Sess." California. 2021, Accessed 19 January, 2022. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB214
California Legislative Information. "Assembly Bill No. 642, Chapter 375, Statutes of 2021, 2021 Reg. Sess." California, 2021. Accessed 19 January, 2022. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB642
California Legislative Information. "Senate Bill No. 332, Chapter 600, Statutes of 2021, 2021 Reg. Sess." California, 2021. Accessed 19 January, 2022. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB332
California Legislative Information. "Senate Bill No. 901." 2018. Accessed 19 January, 2022. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB901
California Legislative Information. "California Codes Public Resources Code Section 4125-4137." Accessed 11 July, 2023.

https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4125.&lawCode=PRC
California State Responsibility Areas, California Open Data Portal, California Department of Forestry and Fire Protection (Cal Fire). Accessed 21 August, 2024. https://data.ca.gov/dataset/california-state-responsibility-areas
California Wildfire & Forest Resilience Task Force, "An Unprecedented Response to an Unprecedented Challenge," Accessed 17 April, 2022. https://wildfiretaskforce.org/about/
California Wildfire & Forest Resilience Task Force. "California's Strategic Plan for Expanding the Use of Beneficial Fire." March 2022. Accessed May 2022. https://wildfiretaskforce.org/wp-content/uploads/2022/05/californias-strategic-plan-for-expanding-the-use-of-beneficial-fire.pdf. https://wildfiretaskforce.org/wp-content/uploads/2022/12/RXFireStrategicPlan2021_2-1.pdf
Californians United for a Responsible Budget (CURB), "People's Plan for Prison Closure," April 2021. Accessed 12 May 2022. https://curbprisonspending.org/uploads/docs/resource-library/Peoples-Plan-for-Prison-Closure.pdf. https://criticalresistance.org/wp-content/uploads/2021/08/Peoples-Plan-for-Prison-Closure.pdf
Calkin, David E., Jack D. Cohen, Mark A. Finney, Matthew P. Thompson, "How risk management can prevent future wildfire disasters in the wildland-urban interface." *Scientific Journal,* Rocky Mountain Research Station. PNAS. 111(2) (2014): 746-751. Accessed 10 March, 2021. https://doi.org/10.1073/pnas.1315088111
Cannon, Amanda C., Michael K. Lerch. "Cultural Resources Assessment of the Riverside-Corona Feeder Realignment, San Bernardino and Riverside Counties, California." Albert A. Webb Associates, April 2009. Accessed 3 April, 2023. https://usbr.gov/lc/socal/envdocs/RCFPFEIR/Appendix%20E%20-%20Cultural%20&%20Paleo%20Resources/E.Cultural%20&%20Paleo%20Resources.pdf
Card, Kenton. *Geographies of Racial Capitalism with Ruth Wilson Gilmore* (An Antipode Foundation film directed by Kenton Card, in association with BFD Productions, 2019). Film. Accessed 5 April 2020. https://antipodeonline.org/geographies-of-racial-capitalism/
Carroll, Matthew S., Patricia J. Cohn, Travis B. Paveglio, Donna R. Drader, Pamela J. Jakes. "Fire Burners to Firefighters: The Nez Perce and Fire." *Journal of Forestry*, Volume 108, Issue 2. (1 March 2010): 71–76. Accessed 9 October, 2020. https://doi.org/10.1093/jof/108.2.71
Chattopadhyay, Swati. "Architectural History or a Geography of Small Spaces?" Eduard F. Sekler Talk, The Society of Architectural Historians. Virtual Lecture. 15 April, 2021. Accessed 25 May, 2021. https://vimeo.com/537508419
Chattopadhyay, Swati. *Representing Calcutta: Modernity, Nationalism, and the Colonial Uncanny*. Routledge, 2006.
Chattopadhyay, Swati. *Unlearning the City: Infrastructure in a New Optical Field*. University of Minnesota Press, 2012.
Chu, Eric, and Kian Goh. "Editorial - Global Ecologies: Politics, Planning, and Design." *Projections 11. The MIT Journal of Planning*. Edited by Kian Goh and Eric Chu. (2016): 7–18. Accessed 18 May, 2023. https://issuu.com/mit-dusp/docs/projections_11_c6932d198ca524

City of Corona. "Corona Safety Element: Public Review Draft." December 2019. Accessed 3 May, 2022. https://bof.fire.ca.gov/media/9566/rpc-2-b-2-corona-safety-element_ada.pdf

Clar, C. Raymond. "1959 - California Government and Forestry from Spanish Days Until the Creation of the Department of Natural Resources in 1927." *Miscellaneous Documents and Reports*, 54 (State of California Documents, 2018). Accessed 1 November 2020. https://digitalcommons.csumb.edu/hornbeck_usa_3_d/54

Clark, S. A., Miller, A. and Hankins, D. L. "Good Fire: Current Barriers to the Expansion of Cultural Burning and Prescribed Fire in California and Recommended Solutions." 2021. Accessed. 9 December, 2021. https://karuktribeclimatechangeprojects.com/good-fire/ Modified. https://karuktribeclimatechangeprojects.wordpress.com/good-fire/ https://karuktribeclimatechangeprojects.files.wordpress.com/2016/11/final-karuk-climate-assessment1.pdf

Clark, Sara A., Bill Tripp, Don Hankins, Colleen E. Rossier, Abigail Varney, and Isobel Nairn. "Good Fire II: Current Barriers to the Expansion of Cultural Burning and Prescribed Fire Use in the United States and Recommended Solutions." For The Karuk Tribe. Published 5 March, 2024. Good Fire I originally published February 17, 2021. Accessed 15 April, 2024. https://karuktribeclimatechangeprojects.wordpress.com/wp-content/uploads/2024/03/good-fire-ii-march-2024.pdf

Coffman Associates, Inc.. "Initial Study for French Valley Airport Riverside County, California." Riverside County. August 2010. Accessed 28 June 2021. https://rcfva.com/sites/g/files/aldnop191/files/migrated/Portals-0-Docs-FinalFrenchValleyInitialStudy081710.pdf

Cohen, Jack. "Reducing the wildland fire threat to homes: Where and how much?" In *Proceedings of the Symposium on Fire Economics, Planning, and Policy: Bottom Lines*. Technical coordination by Gonzales-Caban, Armando; Omi, Philip N.. San Diego, CA. Gen. Tech. Rep. PSW-GTR-173. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station (5-9 April 1999):189-195. Accessed 10 March, 2021. https://www.fs.usda.gov/psw/publications/documents/psw_gtr173/psw_gtr173_04_cohen.pdf

Cohen, Jack. "The Wildland-urban Interface Fire Problem." *Fremontia*, Volume 38:2/38:3. (April 2010/July2010): 16-22. Accessed 10 March, 2021. https://www.fs.usda.gov/rm/pubs_other/rmrs_2010_cohen_j002.pdf

Cohen, Jack. "The wildland-urban interface fire problem: A consequence of the fire exclusion paradigm." *Forest History Today*. Fall (2008): 20-26. Accessed 20 April, 2021. https://foresthistory.org/wp-content/uploads/2016/12/Cohen_wildland-urban-interface-fire-problem.pdf

Conflict and Environment Observatory. Accessed 5 April, 2023. https://ceobs.org/projects/military-emissions/

Congress.gov. "Congressional Record: Sixty-first Congress. Sess. III. Chs . 181, 185, 186. (1911), 961." Accessed 21 August, 2024. https://www.congress.gov/61/crecb/1911/03/03/GPO-CRECB-1911-pt5-v46-6.pdf

Cordero-Lamb, Julie, Jared Dahl Aldern, and Teresa Romero. "Bring Back the Good Fires." *News from native California*, 31 (3). (2018); Modified and published on The ICW

Blog, 2020. Accessed 7 November, 2021. https://icwblog.wordpress.com/2020/10/06/bring-back-the-good-fires/
Corona Heritage Park and Museum. "Heritage Park History. From Foothill Lemon Company est. 1911 to Heritage Park est. 2000." Accessed 3 May, 2022. https://www.coronaheritage.org/history
Cultural Burning as a Climate Adaptation Strategy, https://cascprojects.org/#/project/4f8c6580e4b0546c0c397b4e/5f2d6f9482ceae4cb3c320fd
Cultural Fire Management Council (CFMC), Accessed 10 October, 2021. https://www.culturalfire.org/
Davis, Mike, and Jon Wiener. *Set the Night on Fire: L.A. in the Sixties*. Verso, 2020.
Davis, Mike, and Robert Morrow. City of quartz: excavating the future in Los Angeles. 2nd Edition. Verso, 2006.
Davis, Mike. "The Case for Letting Malibu Burn." Environmental History Review 19, no. 2 (1995): 1-36. Accessed 12 May, 2020. https://doi.org/10.2307/3984830
Davis, Mike. "Los Angeles After the Storm: The Dialectic of Ordinary Disaster." *Antipode* 27, 3 (1995): 221-241. Accessed 12 May, 2020. https://doi.org/10.1111/j.1467-8330.1995.tb00276.x
Davis, Mike. *Ecology of Fear: Los Angeles and the Imagination of Disaster*. Verso, 2020.
Demos, T. J.. "The Agency of Fire: Burning Aesthetics,." *eflux Journal* #98 (February 2019). Accessed 2 June, 2020. https://www.e-flux.com/journal/98/256882/the-agency-of-fire-burning-aesthetics/
Department of the Army, Office of the Assistant Secretary of the Army for Installations, Energy and Environment. "United States Army Climate Strategy." February 2022. Accessed 2 November, 2022. https://www.army.mil/e2/downloads/rv7/about/2022_army_climate_strategy.pdf
Du Bois, W. E. B. *The Souls of Black Folk*. Clydesdale Press, 2019.
EIP Associates. "Santa Ana Integrated Watershed Plan Volume 2: Environmental and Wetlands Component." Santa Ana Watershed Project Authority. 2002. Accessed 15 March, 2021. https://sawpa.gov/wp-content/uploads/2016/09/IWP-2002-Vol2.pdf
Environmental Office of the Santa Ynez Band of Chumash Indians. https://chumash.gov/environment, Accessed 4 January 2022.
Eriksen, Christine and Don L. Hankins. "Chapter 14: Colonisation and Fire: Gendered dimensions of indigenous fire knowledge retention and revival." In *The Routledge Handbook of Gender and Development*, edited by A. Coles, L. Gray, and J. Momsen. Routledge, 2015.
Estes, Nick. *Our History is the Future: Standing Rock Versus the Dakota Access Pipeline, and the Long Tradition of Indigenous Resistance*. Verso, 2019.
Fenelon, James V. and Julia Bogany. "Indigenous Water Talks—Research on the Santa Ana and Los Angeles River Environs." Water Resources and Policy Initiative Annual "Virtual" Conference, California State University San Bernandino. 15 April, 2021. Accessed 2 May, 2022. /https://www.calstate.edu/impact-of-the-csu/research/water/Documents/conference/2021/indigenous-water-talks-research-on-the-santa-ana-and-los-angeles-river-environs.pdf
Flagg, James Montgomery. *I want you for U.S. Army: nearest recruiting station*. ca. 1917. Photograph. Accessed 21 August, 2024. https://www.loc.gov/item/96507165/

Forest Service, USDA; Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service, USDI. "Urban wildland interface communities within vicinity of Federal lands that are at high risk from wildfire." Notices, Federal Register, Vol. 66, No. 3, USDA, USDI (2001): 751-777. Accessed 10 August, 2020. https://www.federalregister.gov/documents/2001/01/04/01-52/urban-wildland-interface-communities-within-the-vicinity-of-federal-lands-that-are-at-high-risk-from

Gabbe, C.J., Pierce, G. & Oxlaj, E. "Subsidized Households and Wildfire Hazards in California." *Environmental Management* 66 (2020): 873–883. Accessed 3 June, 2021. https://doi.org/10.1007/s00267-020-01340-2

Garde, Ajay and Qi Song. "Housing Affordability Crisis and Inequities of Land Use Change: Insights From Cities in the Southern California Region." *Journal of the American Planning Association,* 88:1. (2022): 67-82. Accessed 15 February, 2023. DOI: 10.1080/01944363.2021.1911673

Garrison, Jessica Debats and Travis E. Huxman. "A tale of two suburbias: Turning up the heat in Southern California's flammable wildland-urban interface." *Cities*,104 (2020). Accessed 19 February, 2021. https://doi.org/10.1016/j.cities.2020.102725

Gilmore, Ruth Wilson and Katherine McKittrick and my peers. In the course GNDS 810 (Queens University): *Black Geographies* / EES 79903 (CUNY GC): *Abolition Geography*. Virtual sessions. August-December 2021.

Gilmore, Ruth Wilson, Brenna Bhandar, and Alberto Toscano. *Abolition Geography: Essays Towards Liberation*. Verso, 2022.

Gilmore, Ruth Wilson. "A Possible Geography of Light at Dusk." *Society and Space*, September 27, 2021. Accessed 8 December, 2021. https://www.societyandspace.org/articles/a-possible-geography-of-light-at-dusk

Gilmore, Ruth Wilson. "Abolition on Stolen Land." Keynote for UCLA Luskin Sanctuary Spaces: Reworlding Humanism. October 9, 2020. Accessed 11 October, 2020. https://vimeo.com/467484872.

Gilmore, Ruth Wilson. "Meanwhile: Making Abolition Geography." The Rapoport Center and the Rothko Chapel at The University of Texas School of Law. 26 September, 2019. Accessed 5 July, 2022. https://utexas.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=6e263899-18e6-41dc-9174-b1160165292a

Gilmore, Ruth Wilson. "Where life is precious, life is precious." The On Being Project with Krista Tippett. 30 March, 2023 Accessed 1 April, 2023. https://onbeing.org/programs/ruth-wilson-gilmore-where-life-is-precious-life-is-precious/

Gilmore, Ruth Wilson. Fragments of Repair/Gathering II: "The Body's Legacies, Pt. 2: The Postcolonial Body." With Kader Attia, Olivier Marboeuf and Maria Hlavajova. BAK basis voor actuele kunst. Hybrid event. 2 May 2021. Published on May 7, 2021. Accessed May 7, 2021. https://www.youtube.com/watch?v=Vyg1W3wv6mA

Gilmore, Ruth Wilson. *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California*. University of California Press, 2006.

Gilmore, Ruth Wilson. The Faculty of Architecture and Spatial Planning biannual Colloquium for Doctoral Students (Zoom Review), Vienna University of Technology, TU Wien, 27 May, 2021.

Glissant, Édouard and Betsy Wing. *Poetics of Relation*. University of Michigan Press, 1997.

Goeman, Mishuana. "Crafting Cartographies – Mapping LA." January 22, 2021. Posted on 25 January 2021. Fowler Museum. Accessed 25 January, 2021. https://vimeo.com/504489940
Goeman, Mishuana. *Mark My Words: Native Women Mapping Our Nations*. Minneapolis: University of Minnesota Press, 2013.
Goh, Kian. "Urbanising climate justice: constructing scales and politicising difference," *Cambridge Journal of Regions, Economy and Society* (August 6 2020). Accessed 9 July 2021. https://doi.org/10.1093/cjres/rsaa010
Goode, Ron W., Stephanie Farish Beard, Christina Oraftik. " Putting Fire on the Land: The Indigenous People Spoke the Language of Ecology, and Understood the Connectedness and Relationship Between Land, Water, and Fire," *Journal of California and Great Basin Anthropology*, Vol. 42, No. 1 (2022): 85–95. Accessed 8 February, 2023. https://www.pepperwoodpreserve.org/wp-content/uploads/2019/09/JCGBA_42-1_Goode-etal_final.pdf
Goode, Ron. "A Community of Relations, A Relationship of Connectedness." Original 2018. Updated 2019. Personally shared.
Goode, Ron. "Burning Down to the Village." May 2013. Personally shared.
Goode, Ron. "The Spirituality of Culture." 2020. Personally shared.
Goodkind, Nicole. "Prison Inmates Are Fighting California's Wildfires for About $3 a Day." *Fortune*, 1 November, 2019. Accessed 5 May, 2020. https://fortune.com/2019/11/01/california-prisoners-fighting-wildfires/
Governor's Forest Management Task Force. "California's Wildfire and Forest Resilience Action Plan," A Comprehensive Strategy of the Governor's Forest Management Task Force. January 2021. Accessed 5 October 2021. https://wildfiretaskforce.org/wp-content/uploads/2022/04/californiawildfireandforestresilienceactionplan.pdf
Governor's Office of Planning and Research. "California Advisory Handbook for Community and Military Compatibility Planning. 2016 Update." State of California. 2016. Accessed 28 February, 2022. https://opr.ca.gov/docs/20190812-2016_CA_Handbook.pdf
Hacker, Allison. "A Programmatic Approach to Dam Removal and River Restoration: Cleveland National Forest, CA." 9 September, 2019. Accessed 25 March, 2021 https://www.americanrivers.org/2019/09/a-programmatic-approach-to-dam-removal-and-river-restoration-cleveland-national-forest-ca/
Hankins, Don. "Letter to Ryan Wulff, National Marine Fisheries Service." 27 July, 2014. Accessed 17 April, 2021. https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/CSPA%20et%20al/part2/aqua_269.pdf
Hankins, Don. "Water As Sacred." In "Tribal Water Stories: A Compilation of California Tribal Stories, Position Papers & Briefing Papers in Conjunction with the 2009 Tribal Water Summit." Edited by Kym Trippsmith. DWR Manager of Statewide Integrated Water Management and CA Dept. of Water Resources (DWR), California Tribal Water Summit Planning Team, 2010. https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/2023/staff-report/ch11-tribal.pdf
Harney, Stefano, and Fred Moten. *The Undercommons: Fugitive Planning and Black Studies*. Minor Compositions, 2013.

Hayes, Kelly. "Ruth Wilson Gilmore on Abolition, the Climate Crisis and What Must Be Done." Truthout. Published 14 April, 2022. Accessed 14 April, 2022. https://truthout.org/audio/ruth-wilson-gilmore-on-abolition-the-climate-crisis-and-what-must-be-done/

Hill, Edward E. and Revised by Renée M. Jaussaud. *Inventory of the Records of the National Park Service Record Group 79*. Park History Program, National Park Service and Organization of American Historians, 2007. Accessed 18 June, 2022. https://www.nps.gov/aboutus/foia/upload/npsrg79_inventory-5.pdf

Insurance Institute for Business & Home Safety. "California Wildfire Public Policy: Mapping the Wildfire Hazard." 2021. Accessed 21 August, 2022. https://ibhs.org/wp-content/uploads/member_docs/IBHS_Wildfire-Mapping-and-Building-Codes_2021.pdf

Jacobs, Jane. The Death and Life of Great American Cities. Vintage Books, 1961.

Kaba, Mariame. *We Do This 'Til We Free Us: Abolitionist Organizing and Transforming Justice*. Ed. Tamara K. Nopper. Haymarket Books, 2021.

Katz, Cindi. "Under the Falling Sky: Apocalyptic Environmentalism and the Production of Nature." In *Marxism in the Postmodern Age: Confronting the New World Order*. Edited by A. Callari, C. Biewener, and S. Cullenberg. The Guilford Press, 1994.

Kehar, Anousheh. "Notes on Processes of Unearthing: Wildfires and the Entanglements of Space." Raumgestaltung und Entwerfen. https://raumgestaltung.tuwien.ac.at/dokumentation/notes-on-processes-of-unearthing/

Keeley, J. E.. "Native American impacts on fire regimes of the California coastal ranges." *Journal of Biogeography*, 29 (2002): 303-320. Accessed 17 June, 2020. doi:10.1046/j.1365-2699.2002.00676.x

Kimmerer, Robin Wall and Frank K. Lake. "Maintaining the mosaic: The Role of Indigenous Burning in Land Management." *Journal of Forestry* 99, no. 11 (2001): 36-41. Accessed 17 April, 2020. https://doi.org/10.1093/jof/99.11.36.

Kimmerer, Robin Wall. "Native Knowledge for Native Ecosystems." *Journal of Forestry*. Volume 98, Issue 8. (August 2000): 4-9. Accessed 17 April, 2020. https://doi.org/10.1093/jof/98.8.4

Kimmerer, Robin Wall. *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Milkweed Editions, 2013.

Kimmerer, Robin Wall. *Gathering Moss: A Natural and Cultural History of Mosses*. Oregon State University Press, 2003.

Knoblauch, Joy. "The Economy of Fear: Oscar Newman Launches Crime Prevention through Urban Design (1969–197x)." *Architectural Theory Review* 19 (3) (2014): 336–54. Accessed 19 June, 2023. doi:10.1080/13264826.2014.1036492.

Kocher, Susan D., Butsic, Van. "Governance of Land Use Planning to Reduce Fire Risk to Homes Mediterranean France and California." *Land* 6, no. 2 (2017). Accessed 18 June, 2020. https://doi.org/10.3390/land6020024

Kramer, Heather Anu, Miranda H. Mockrin, Patricia M. Alexandre, and Volker C. Radeloff, "High wildfire damage in interface communities in California," *International Journal of Wildland Fire*, 28, (2019): 641-650. Accessed 5 June, 2020. https://doi.org/10.1071/WF18108

Kroeber, Theodora. Ishi in Two Worlds. *A biography of the last wild I***** in North America*. University of California Press, 1961.
Kroeber, Theodora. *Ishi. The Last of His Tribe*. Parnassus Press, 1964.
Lake, Frank K.. "Historical and Cultural Fires, Tribal Management and Research Issue in Northern California: Trails, Fires and Tribulations." *Occasion: Interdisciplinary Studies in the Humanities*, Volume 5 (March 1, 2013). Accessed 18 August, 2021. Modified. https://shc.stanford.edu/arcade/publications/occasion/comparative-wests/historical-and-cultural-fires-tribal-management-and. https://arcade.stanford.edu/occasion/historical-and-cultural-fires-tribal-management-and-research-issue-northern-california.
Lake, Frank Kanawha and Amy Cardinal Christianson. "Indigenous Fire Stewardship." *In Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires*. edited by Samuel L. Manzello. Springer, 2020. https://doi.org/10.1007/978-3-319-52090-2_225
Lambert, Léopold, Melanie K. Yazzie, Nick Estes. "Introduction." In "Settler Colonialism in Turtle Island." *The Funambulist*, 20. (November – December 2018). Accessed 8 July, 2020. https://thefunambulist.net/magazine/turtle-island/introduction-settler-colonialism-turtle-island-nick-estes-melanie-k-yazzie
Lambert, Léopold, Mishuana Goeman, Cindi Alvitre, Desiree Martinez, Melanie K. Yazzie." Mapping Indigenous L.A.: Excavating Sacred Spaces in the City," "Settler Colonialism in Turtle Island," The Funambulist, 20, (November – December 2018). Accessed 8 July, 2020. https://thefunambulist.net/magazine/turtle-island/interview-mapping-indigenous-los-angeles-excavating-sacred-space-city-mishuana-goeman-part-1-cindi-alvitre-desiree-martinez-part-2
Lambert, Léopold. "Making Abolition Geography in California's Central Valley with Ruth Wilson Gilmore," *The Funambulist*, 21. (January-February 2019). Accessed 8 July, 2020. https://thefunambulist.net/magazine/21-space-activism/interview-making-abolition-geography-california-central-valley-ruth-wilson-gilmore
Lando, Todd. "Living with Fire in Marin County: Busting Myths Around Creating Defensible Space." Virtual lecture. Posted on April 22, 2021. Fire Safe Marin. YouTube. 20:45. Accessed 17 January, 2023. https://www.youtube.com/watch?v=a4JpOdS9ffI
Larkin, Kyle. "The Transformation of the Santa Ana River: A Story of Changing Demographics, Values, and Landscapes." *The UCI Undergraduate Research Journal*. (2015): 25-32. Accessed 8 January, 2022. https://archive.urop.uci.edu/journal/journal15/03-Larkin.pdf. OR https://bpb-us-w2.wpmucdn.com/wp.ovptl.uci.edu/dist/e/3/files/2023/09/2015_03-Larkin.pdf.
Laudenslayer, William F. and Herman H. Darr. "Historical effects of logging on forests of the Cascade and Sierra Nevada ranges of California." *Transactions of the Western Section of the Wildlife Society* (Pacific Southwest Research Station, 1990): 12-23. Accessed 8 June, 2020. https://www.fs.usda.gov/research/treesearch/20500
Leanne Betasamosake Simpson. Accessed 17 August, 2024 https://www.leannesimpson.ca/
Lee, Robert, Tristan Ahtone, Margaret Pearce, Kalen Goodluck, Geoff McGhee, Cody Leff, Katherine Lanpher and Taryn Salinas. "Land-Grab Universities, A High Country News Investigation." Accessed 18 August, 2020. https://www.landgrabu.org/
Leonard, Kelsey (Shinnecock Nation), Jared Dahl Aldern, Amy Cardinal Christianson (Métis Nation of Alberta), Darren Ranco (Penobscot Nation), Casey Thornbrugh

(Mashpee Wampanoag), Philip A. Loring, Michael R. Coughlan, Penelope Jones, Jason Mancini, Daniel May, Faisal Moola, Grant Williamson, Cathelijne R. Stoof. "Indigenous Conservation Practices Are Not a Monolith: Western cultural biases and a lack of engagement with Indigenous experts undermine studies of land stewardship." *EcoEvoRxiv,* 24 July, 2020. Accessed 19 May, 2021. https://doi.org/10.32942/osf.io/jmvqy. https://ecoevorxiv.org/repository/object/4311/download/8636/

Litman, Laurie and Gary Nakamura. "Forest History." *Forest Stewardship Series 4*, Publication 8234 (2007): 1-8. Accessed 3 May 2021. https://doi.org/10.3733/ucanr.8234

Long, Jonathan W., Frank K. Lake, and Ron W. Goode. "The importance of Indigenous cultural burning in forested regions of the Pacific West, USA." *Forest Ecology and Management 500* (2021). Accessed 14 January, 2022. https://doi.org/10.1016/j.foreco.2021.119597

Luna, Taryn. "Newsom apologizes for California's history of violence against Native Americans." Los Angeles Times. 18 June, 2019. Accessed 15 May, 2020. https://www.latimes.com/politics/la-pol-ca-gavin-newsom-apology-california-native-american-tribes-061818-story.html

MacLeavy, Julie and Columba Peoples. "Workfare–Warfare: Neoliberalism, 'Active' Welfare and the New American Way of War." *Antipode*. 41. (2009):890-915. Accessed August 20, 2022. https://doi.org/10.1111/j.1467-8330.2009.00701.x.

Manzello, Samuel L. Eds. *Encyclopedia of wildfires and wildland-urban interface (WUI) fires*. Springer, 2020.

Mariposa County. "Williamson Act." Accessed 22 May, 2022. https://www.mariposacounty.org/1023/Williamson-Act#:~:text=The%20California%20Land%20Conservation%20Act,or%20related%20open%20space%20use.

Marks-Block, Tony and William Tripp. "Facilitating Prescribed Fire in Northern California through Indigenous Governance and Interagency Partnerships." *Fire*. 2021, 4, 37. (16 July 2021). Accessed 6 February, 2022. https://doi.org/10.3390/ fire4030037. https://www.mdpi.com/2571-6255/4/3/37

Marks-Block, Tony, Moderator. "Revitalizing Cultural Fire Across California: A discussion with Indigenous Leaders." Huntington-USC Institute on California and the West, Cal State East Bay A2E2, and C. E. Smith Museum of Anthropology, Cal State East Bay. 9 April, 2021. Accessed 9 April, 2021. https://www.youtube.com/watch?v=NmFTLHx1TDo/

Martinez, Deniss J., Nina Fontana, Melinda M. Adams, Beth Rose Middleton Manning. "Keepers of the Flame." Winter 2022 Report.

Maynard, Robyn and Leanne Betasamosake Simpson. Rehearsals for Living. Haymarket Books and Knopf Canada, 2022. eBook.

McKittrick, Katherine. *Dear Science and Other Stories*. Duke University Press, 2021.

Middleton Manning, Beth Rose. "The Wildfire epidemic: Solutions from data, tech, and ancestral knowledge." Spaceship One podcast. 17 December, 2021. Accessed 10 January, 2022. https://podcasters.spotify.com/pod/show/spaceship-one/episodes/The-Wildfire-Epidemic-Solutions-from-Data--Tech---Ancestral-Knowledge-part-3-e1bp819

Middleton Manning, Beth Rose. *Upstream: Trust Lands and Power on the Feather River*. University of Arizona Press, 2018.
Miller, Larisa. "The Secret Treaties with California's I*****." *Prologue*, National Archives. Vol. 45, no. 3/4 (2013): 38-45. Accessed 8 April, 2020. www.archives.gov/files/publications/prologue/2013/fall-winter/treaties.pdf
Miller, Rebecca. "Residents Reducing Wildfire Risks: Findings from the NFPA® Firewise® Sites of Excellence Pilot, 2019–2020." National Fire Protection Association (NFPA), 2022. Accessed 17 May, 2023. https://www.nfpa.org/education-and-research/wildfire/firewise-usa/firewise-sites-of-excellence
Mohanty, Chandra T.. *Feminism Without Borders: Decolonizing Theory, Practicing Solidarity*. Duke University Press, 2003.
Mooney, Harold, Erika Zavaleta, and Melissa C. Chapin, eds. *Ecosystems of California*. University of California Press, 2016.
Nasser-Eldin, Mahasen. "How Do I Construct Historical Narratives through Image and Sound?" Interview by Arda Aghazarian in *Jerusalem Story*. November 16, 2021. Accessed 30 December, 2023. https://www.jerusalemstory.com/en/blog/mahasen-nasser-eldin-how-do-i-construct-historical-narratives-through-image-and-sound
National Fire Protection Association. "How to become a Firewise USA site." Accessed 7 July 2023. https://www.nfpa.org/education-and-research/wildfire/firewise-usa/become-a-firewise-usa-site
National Park Service, US Department of the Interior and US Department of Agriculture. "Federal Wildland Fire Management Policy & Program Review." 1995. Accessed 5 March, 2021. http://www.npshistory.com/publications/fire/fed-wildland-fire-mgt-policy-draft-1995.pdf
National Park Service. "Fruit Rancher, Family Man, Writer...Father of the National Park Service!" Accessed 5 June, 2023. https://www.nps.gov/jomu/index.htm
Nelson, Peter. "Indigenous Archaeology in Central California." 13 October 2014. Published on 6 January, 2015. The Institute for the Study of Societal Issues (ISSI) at the University of California Berkeley. YouTube. 38:58. Accessed on 20 April, 2022. https://www.youtube.com/watch?v=7qNd2j_bdWg
Nelson, Peter. "Fire and Indigenous Stewardship." In "Historical and Scientific Wildfire Education Workshop." Published 25 May, 2021. City of Santa Rosa. YouTube. 1:03:30. Accessed on 20 April, 2022. https://www.youtube.com/watch?v=ZKW9i7KveRQ
Nelson, Peter. "Where Have All the Anthros Gone? The Shift in California Indian Studies from Research "on" to Research "with, for, and by" Indigenous Peoples." *American Anthropologist 123*, no. 3 (2021): 469-473. Accessed May 2, 2022. https://doi.org/10.1111/aman.13633.
Newman, Oscar, *Creating Defensible Space*. U.S. Department of Housing and Urban Development Office of Policy Development and Research,1996.
Nikolakis, W. Roberts, E., Hotte, N., Ross, R.M., 2020. "Goal setting and Indigenous fire management: a holistic perspective." *Int. J. Wildland Fire* 29, 974–982
Norris. Hundley Jr.. *The Great Thirst: Californians and Water: A History*. University of California Press, 2001.
O'Neil, Caitlin. "The 2020-21 Budget: Effectively Managing State Prison Infrastructure." Legislative Analyst's Office. February 28, 2020. Accessed 5 June, 2022. https://lao.ca.gov/reports/2020/4186/prison-infrastructure-022820.pdf,

Office of Governor Gavin Newsom. "California and National Defense." Accessed 26 January, 2023. https://militarycouncil.ca.gov/m_defenseincalifornia/#:~:text=California%20and%20National%20Defense,in%20a%20rapidly%20changing%20world

Office of State Fire Marshal, "History," accessed 8 August 2022, https://osfm.fire.ca.gov/about-us/osfm-history/ Updated description and web page: Office of State Fire Marshal, https://osfm.fire.ca.gov/, accessed, 21 August, 2024.

Office of the Governor. "Assembly Bill No. 3074, Chapter 259." 29 September 2020. Accessed 7 November 2021. https://bof.fire.ca.gov/media/10236/full-10-b-1-ab-3074-signing-message-and-chaptered-bill-language.pdf

Office of the State Fire Marshal (Cal Fire). "Fire Hazard Severity Zone Methods." Modified. Accessed 21 August, 2024. https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/osfm-website/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-map/short_fhsz_methods_042324.pdf?rev=8fc7f1245bbb4bab9e3afe42c25673a8&hash=6E5E3014AE4428F60FDB72CA86E0ABAB

Office of the State Fire Marshal (Cal Fire). "Fire Hazard Severity Zones." Modified. Accessed 21 August, 2024. https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones

Office of the State Fire Marshal (Cal Fire). "LRA Fire Hazard Severity Zone Maps." Modified. Accessed 21 August, 2024. https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps

Office of the State Fire Marshal, California Department of Forestry and Fire Protection (Cal Fire). "Fire Hazard Severity Zones." Modified. Accessed 21 August, 2024. https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones,

Office of the Under Secretary of Defense for Acquisition and Sustainment. "Department of Defense Plan to Reduce Greenhouse Gas Emissions." 2-3 April, 2023. Accessed 5 September, 2023. https://media.defense.gov/2023/Jun/16/2003243454/-1/-1/1/2023-DOD-PLAN-TO-REDUCE-GREENHOUSE-GAS-EMISSIONS.PDF

Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, US Department of Defense. "DOD Directive 4715.21: Climate Change Adaptation and Resilience." January 14, 2016. Accessed 20 May 2021. https://dod.defense.gov/Portals/1/Documents/pubs/471521p.pdf

Office of the Under Secretary of Defense, (Comptroller)/Chief Financial Officer. "Defense Budget Overview: United States Department of Defense Fiscal Year 2024 Budget Request." March, 2023. Accessed 16 September, 2023.

Office of Wildland Fire. Department of the Interior, Departmental Manual. Department of the Interior, 2017. Accessed 25 August, 2021. https://www.doi.gov/sites/doi.gov/files/elips/documents/620-dm-1.pdf

Oswald, W. W., D.R. Foster, B.N. Shuman, E.S. Chilton, D. L. Doucette, D.L. Duranleau. "Conservation implications of limited Native American impacts in pre-contact New England." Nature Sustainability, 3 (2020): 241–246. Accessed 19 May, 2021. https://doi.org/10.1038/s41893-019-0466-0

Palmer, Meredith Alberta. “Rendering Settler Sovereign Landscapes: Race and Property in the Empire State.” *Environment and Planning D: Society and Space* 38, no. 5 (October 2020): Accessed 5 December 2020. 793–810. https://doi.org/10.1177/0263775820922233.

Pandey, Gyanendra. “In Defence of the Fragment: Writing about Hindu-Muslim Riots in India Today.” *Economic and Political Weekly*, vol. 26, no. 11/12 (1991): 559-572. Accessed 10 October, 2021. http://www.jstor.org/stable/4397413.

Paulus, Chris and Frances Ragle. “Indigenous Management Practices (IMP) with the applied use of Traditional Ecological Knowledge (TEK).” Virtual lecture. April 6, 2021. Posted April 7, 2021. Return California (Return California's 1st Tuesday of April Listening Roundtable). YouTube, 1:33:02. Accessed 4 May, 2021. https://youtu.be/wfQkipCGDu0?si=rWNR1ocU4VtL3oGu.

Petek, Gabriel. Legislative Analyst’s Office. "Reducing the Destructiveness of Wildfires: Promoting Defensible Space in California.“ September 2021. Accessed 10 January, 2023. https://lao.ca.gov/Publications/Report/4457

Ponce de León, Jennifer. *Another Aesthetics is Possible: Arts of Rebellion in the Fourth World War*. Duke University Press, 2021.

Porter, Libby. “Possessory Politics and the Conceit of Procedure: Exposing the Cost of Rights under Conditions of Dispossession.” *Planning Theory*, vol. 13, no. 4. (November 2014): 387–406. Accessed 6 June 2020. doi:10.1177/1473095214524569.

Pulido, Laura and Juan de Lara. “Reimagining the ‘Justice’ in Environment Justice: Radical Ecologies, Decolonial Thought, and the Black Radical Tradition” *Environment and Planning E: Nature and Space* (1-2), (2018): 76-98. Accessed 19 May 2020. https://doi.org/10.1177/251484861877036

Pulido, Laura, Laura Barraclough and Wendy Cheng. *A People’s Guide to Los Angeles*. University of California Press, 2012.

Pulido, Laura. *Environmentalism and Economic Justice: Two Chicano Struggles in the Southwest*. University of Arizona Press, 1996.

Pulitano, Elvira. “Waiting for Ishi: Gerald Vizenor’s Ishi and the Wood Ducks and Samuel Beckett’s Waiting for Godot.” *Studies in American Indian Literatures* 9, no. 1 (1997): 73-92. Accessed 10 January, 2023. http://www.jstor.org/stable/20739386.

Pyne, Stephen. *California: A Fire Survey*. The University of Arizona Press, 2016.

Rademacher, Anne. *Reigning the river: urban ecologies and political transformation in Kathmandu*. Duke University Press, 2011.

Richard W. Haynes, “An Analysis of the Timber Situation in the United States: 1952 to 2050.” General Technical Report. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, 2003. Accessed 5 September 2020. https://www.fs.usda.gov/pnw/pubs/pnw_gtr560.pdf

Riverside County Fire. "History.” Accessed 2 May, 2023. https://www.rvcfire.org/about-us/history

Riverside County Fire. “Locate Fire Stations, Filter by Battalion or City.” Accessed 2 May, 2023. https://www.rvcfire.org/resources/fire-stations

Robbins, Margo. "Climate Change and Native Knowledge." In "Lookout: Envisioning Futures with Wildfire." A series hosted by the Spring Creek Project and the Environmental Arts and Humanities Initiative at Oregon State University (OSU). 18 January, 2022. Published 24 January, 2022. YouTube. 51:59. Accessed 26 January,

2022. https://www.youtube.com/watch?v=w5BslpWORwI. https://www.frames.gov/catalog/65199
Rothman, Hal K.. *A Test of Adversity and Strength: Wildland Fire in the National Park System.* National Park Service, 2006. Accessed 10 January, 2022. https://www.nps.gov/subjects/fire/upload/wildland-fire-history.pdf
Santa Clara County Firesafe Council (CFSC). "Santa Clara County Community Wildfire Protection Plan." August 2023. Accessed September 2023. https://sccfc.maps.arcgis.com/sharing/rest/content/items/59c5a1772e3849ad8f225e8f638431d1/data
Schwarz, Charles F., Edward C. Thor, and Gary H. Elsner. "Wildland Planning Glossary." USDA Forest Serv. Gen Tech. Rep. PSW-13. Pacific Southwest Forest and Range Exp. Stn., Berkeley, Calif. (1976): 232-233. Accessed 16 July, 2020. https://www.fs.usda.gov/psw/publications/documents/psw_gtr013/psw_gtr013.pdf
Scott, M.B.. California Department of Water Resources, San Bernardino Valley Municipal Water District, Western Municipal Water District of Riverside County. "Development of water facilities in the Santa Ana River Basin, California, 1810-1968: a compilation of historical notes derived from many sources describing ditch and canal companies, diversions, and water rights." U.S. Geological Survey, 1977. Accessed 10 June, 2021. https://pubs.usgs.gov/of/1977/0398/report.pdf. https://web.archive.org/web/20070701051151if_/http:/wri.csusb.edu/web-pages/archives/saw-biblio/draftFinalSantaAnaRiverWatershedBibliography.pdf
Sepulveda, Charles. "Our sacred waters: Theorizing Kuuyam as a decolonial possibility." *Decolonization: Indigeneity, Education & Society* 7(1) (2018): 40-58. Accessed 10 June, 2020. https://jps.library.utoronto.ca/index.php/des/article/view/30384
Sepulveda, Charles. "California's Mission Projects: The Spanish Imaginary in Riverside and Beyond." PhD dissertation. University of California Riverside, 2016.
Shi, Linda, Eric Chu, Isabelle Anguelovski, Alexander Aylett, Jessica Debats, Kian Goh, Todd Schenk, Karen C. Seto, David Dodman, Debra Roberts, J. Timmons Roberts and Stacy D. VanDeveer. "Roadmap towards justice in urban climate adaptation research." *Nature Climate Change* 6 (2016): 131–137. Accessed 9 August, 2021. https://doi.org/10.1038/nclimate2841
Sibilla, Nick. "Inmates Who Volunteer to Fight California's Largest Fires Denied Access to Jobs on Release." *USA Today*. 20 August, 2018. Accessed 7 April, 2020. https://www.usatoday.com/story/opinion/2018/08/20/californias-volunteer-inmate-firefighters-denied-jobs-after-release-column/987677002/
Smith, Linda Tuhiwai. *Decolonizing Methodologies: Research and Indigenous Peoples.* 2nd Edition. Zed, 2012. https://dokumen.pub/decolonizing-methodologies-research-and-indigenous-peoples-9781786998132-9781786998125-9781350225282-9781786998149.html
Smith, Neil. "Contours of a spatialized politics: Homeless vehicles and the production of geographical scale," *Social Text 33* (1992): 55-81. Accessed 14 May, 2022.
https://doi.org/10.2307/466434"
Smith, Neil. *Uneven Development: Nature, Capital, and the Production of Space.* Third edition. University of Georgia Press, 2008

Smokey Bear. "About the Campaign." Accessed 21 August, 2024. https://smokeybear.com/en/smokeys-history/about-the-campaign

Sommers, William T.. "The Emergence of the Wildland Urban Interface Concept." *Forest History Today*. Fall (2008):12-18. Accessed 25 July, 2020. https://foresthistory.org/wp-content/uploads/2016/12/Sommers_emergence-of-wildland.pdf

Sosa, Anabel. "California prisoners could get higher wages under new plan – but still less than $1 an hour." *Los Angeles Times*, 26 November, 2023. Accessed 26 November, 2023. https://www.latimes.com/california/story/2023-11-26/california-prisons-double-wages-inmates-work-labor-involuntary-servitude#:~:text=Approximately%2040%25%20of%20California's%2096%2C000,well%20as%20clerking%20and%20construction.

South Coast Air Quality Management District (SCAQMD). "After a Wildfire – Safe Clean-Up." Accessed 22 February, 2020. https://www.aqmd.gov/docs/default-source/publications/fact-sheets/after-wildfire-clean-up.pdf?sfvrsn=6

South Coast Air Quality Management District (SCAQMD). "Orchard Smudge Pots Cooked Up Pall of Smog." In "History of Air Pollution Control in Southern California." June 1997. Accessed September 12, 2020. https://www.aqmd.gov/home/research/publications/history-of-air-pollution-control#Smudge%20Pots

South Coast Air Quality Management District (SCAQMD). "South Coast Air Quality Management District, SCAQMD Issues Smoke Advisory Due to Holy Fire." Announcements, 2018. Accessed September 12, 2020. http://www.aqmd.gov/docs/default-source/news-archive/2018/smoke-advisory-aug9-2018-holy-fire.pdf?sfvrsn=8

South Coast Air Quality Management District (SCAQMD). "During a Wildfire – Protect Yourself." Accessed September 12, 2020. https://www.aqmd.gov/docs/default-source/publications/fact-sheets/during-wildfire-protect-yourself.pdf?sfvrsn=6

South Coast Air Quality Management District (SCAQMD). "South Coast AQMD Continues Smoke Advisory Due to Bobcat Fire and El Dorado Fire." Accessed September 12. 2020. Accessed September 12, 2020. http://www.aqmd.gov/docs/default-source/news-archive/2020/bobcat-and-eldorado-fire-sept9-2020.pdf

South Coast Air Quality Management District (SCAQMD). "The Job Ahead." Accessed September 12, 2020. https://www.aqmd.gov/aq-spec/aboutscaqmd

South Coast Air Quality Management District (SCAQMD). "The Southland's War on Smog: Fifty Years of Progress Toward Clean Air (through May 1997)." 1997. Accessed September 12, 2020. https://www.aqmd.gov/home/research/publications/50-years-of-progress#Formation%20of%20the%20South%20Coast%20Air%20Quality%20Management%20District

South Coast Air Quality Management District (SCAQMD). "What is the South Coast AQMD?" Accessed September 12, 2020. https://www.aqmd.gov/aq-spec/aboutscaqmd

South Coast Air Quality Management District. "Rule 444. Open Burning," 2013. Accessed 19 August, 2020. http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-444.pdf or https://www.aqmd.gov/home/rules-compliance/compliance/open-burn#:~:text=Purpose%3A,protect%20public%20health%20and%20safety.

St. John, Paige. "Riverside County to send some inmates to work at state fire camps." *Los Angeles Times*. April 24, 2013. Accessed 28 January, 2021. https://www.latimes.com/politics/la-xpm-2013-apr-24-la-me-pc-ff-jail-prison-fire-camp-20130424-story.html

State of California, Natural Resources Agency, Department of Water Resources. "California Water Plan Update 2023, Public Review Draft." September 2023. Accessed 19 December 2023. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2023/PRD/California-Water-Plan-Update-2023-Public-Review-Draft.pdf. https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Management/Water-Supply-Contract-Extension/Files/SWPWater-Supply-Contract-AmendmentsPRDEIRFeb2020.pdf?hash=0ACAA9E7C43F598B9460438394D0A572C49830E1&la=en.

State Water Resources Control Board. "Tribal Engagement." In "Draft Staff Report: Sacramento/Delta Update to the Bay-Delta Plan." September 2023. Accessed 15 April 2024. https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/staff_report.html

Steffensen, Victor. *Fire Country: How Indigenous Fire Management Could Help Save Australia*. Hardie Grant Publishing, 2020.

SWCA Environmental Consultants. "Santa Clara County Community Wildfire Protection Plan." August 2016. Accessed 5 September, 2022. /https://www.sccfd.org/wp-content/uploads/documents/fire_prevention/CWPP/CWPP_Strategic_Countywide_Document_08_29_16.pdf

SWCA Environmental Consultants. "Santa Clara County Community Wildfire Protection Plan." Draft, June 1, 2016. Accessed 5 September, 2022. https://www.sccfd.org/wp-content/uploads/2014/08/SantaClaraCWPP_Draft_FrontMatter-TOC.pdf

The California Governor's Office of Emergency Services (Cal OES). "California Sets Framework for Wildfire Home Hardening Program." Cal OES News. Published 7 May, 2021, Accessed 19 June, 2021. https://news.caloes.ca.gov/california-sets-framework-for-wildfire-home-hardening-program/

The Department of Planning & Development Safety Element Team. "County of Santa Clara Safety Element Update." 28 October, 2022. Accessed 19 May, 2023. https://www.rcdsantaclara.org/files/103a40701/4.8_SEU%3A+County+of+Santa+Clara+Safety+Element+Update%3A+INVITATION+FOR+THE+1ST+STAKEHOLDER+MEETING%2C+November+10.pdf

The Interagency Federal Wildland Fire Policy Review Working Group. "Review and Update of the 1995 Federal Wildland Fire Management Policy." 2001. Accessed 18 June 2021. https://www.nifc.gov/sites/default/files/policies/FederalWildlandFireManagementPolicy.pdf

The Military Emissions Gap. Accessed 9 May, 2023. https://militaryemissions.org/

The Red Nation. "Ten Point Program." In "The Red Nation Pamphlet Manifesto." Accessed 4 February, 2021. https://therednationdotorg.wordpress.com/manifesto/10-point-program/

The Southwest Climate Adaptation Science Center (SWCASC) and the NPS Tribal Engagement and Climate Change workgroup. "Tribal-Led Renewal of Black Oak Traditions for Climate Adaptation." 19 May, 2022. Accessed 25 January, 2023. https://www.swcasc.arizona.edu/events/tribal-led-renewal-black-oak-traditions-climate-adaptation

The Tongva Taraxat Paxaavxa Conservancy. "What is Kuuy nahwá'a?" Accessed 10 May, 2024. https://www.tongva.land/

The Treaty 8 Tribal Association. Accessed 8 May, 2023. http://treaty8.bc.ca/treaty-8-accord/

The U.S. Department of Housing and Urban Development, Office of Community Planning and Development. "The 2023 Annual Homelessness Assessment Report (AHAR to Congress) Part 1: Point-In-Time Estimates of Homelessness." December 2023. Accessed 9 February 2024. https://www.huduser.gov/portal/sites/default/files/pdf/2023-AHAR-Part-1.pdf

Timbrook, Jan; John R. Johnson; David Earle. "Vegetation Burning by the Chumash," *Journal of California and Great Basin Anthropology*, Volume 4, Issue 2 (December 1982): 163 – 186. Accessed 4 May, 2020. https://escholarship.org/uc/item/1rv936jq

Trabuco Ranger District Cleveland National Forest. "Trabuco Ranger District Dam Removal and Aquatic Organism Passage Monitoring." Annual Report. 17 November, 2017. Accessed 16 February, 2021. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd568942.pdf

Trabuco Ranger District. Accessed 16 February, 2021. https://www.fs.usda.gov/detail/cleveland/home/?cid=FSEPRD477258

Tuck, Eve, Marcia McKenzie & Kate McCoy. "Land education: Indigenous, post-colonial, and decolonizing perspectives on place and environmental education research," *Environmental Education Research*, 20:1 (2014): 1-23. Accessed 5 September, 2020. DOI: 10.1080/13504622.2013.877708

U.S. Department of Housing and Urban Development. "The 2023 Annual Homeless Assessment Report to Congress." December 2023, Updated January 2024. Accessed 1 June, 2024. https://shou.senate.ca.gov/sites/shou.senate.ca.gov/files/Homelessness%20in%20CA%202023%20Numbers%20-%201.2024.pdf

U.S. Fire Administration. "Wildland Fires: A Historical Perspective." Topical Fire Research Series, Volume 1, Issue 3 (October 2000, Rev. December 2001): 8-12. Accessed 19 June, 2021. https://apps.usfa.fema.gov/downloads/pdf/statistics/v1i3-508.pdf

U.S. Government Accountability Office. "Managing Federal Lands and Waters." Accessed 4 August, 2021. https://www.gao.gov/managing-federal-lands-and-waters#:~:text=Four%20major%20federal%20land%20management,about%2095%25%20of%20these%20lands. https://www.gao.gov/key_issues/managing_federal_land_waters/issue_summary

University of Southern California. "Fighting Fire with Fire: Indigenous Approaches to Environmental Conservation." 2 December, 2021, Accessed 12 April, 2022. https://campusactivities.usc.edu/speaker-series/past-events/fighting-fire-with-fire-indigenous-approaches-to-environmental-conservation/

US Army Corps of Engineers. "Prado Basin Feasibility Study." Accessed 8 June, 2023. https://www.spl.usace.army.mil/Missions/Civil-Works/Projects-and-Studies/Prado-

Basin-Feasibility-Study/#:~:text=Prado%20Basin%20Feasibility%20Study,-This%20Final%20Integrated&text=The%20study%20identified%20and%20evaluated,and%20their%20associated%20riparian%20areas.
US Forest Service, US Department of Agriculture. "Nature's Benefits: Recreation." 8 September, 2023. Accessed 10 December, 2023. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd624828.pdf
US Forest Service. "Resilient Landscapes." Accessed 23 September 2023. https://www.fs.usda.gov/managing-land/fire/resilient-landscapes#:~:text=The%20U.S.%20Forest%20Service%20is,vegetation%20that%20feeds%20extreme%20wildfires.
USDA, Forest Service Pacific Southwest Region. "Agreement For Shared Stewardship of California's Forest and Rangelands Between the State of California and the USDA, Forest Service Pacific Southwest Region." 2020. Accessed 1 April, 2022. https://www.gov.ca.gov/wp-content/uploads/2020/08/8.12.20-CA-Shared-Stewardship-MOU.pdf
Vasquez, Irene. "Evaluation of Restoration Techniques and Management Practices of Tule Pertaining to Eco-cultural Use." Master's Thesis. Humboldt State University. May 2019. https://digitalcommons.humboldt.edu/etd/282
Vidal-Riveros, Cristina, Pablo Souza-Alonso, Sandra Bravo, Rafaela Laino, Marie Ange Ngo Bieng. "A review of wildfires effects across the Gran Chaco region." *Forest Ecology and Management*, Volume 549 (2023). Accessed 13 November, 2023. https://doi.org/10.1016/j.foreco.2023.121432.
Vizenor, Gerald R.. *Native Liberty: Natural Reason and Cultural Survivance*. University of Nebraska Press, 2010.
Vizenor, Gerald R. Survivance: Narratives of Native Presence. University of Nebraska Press, 2008.
Wagner, Henry R.. "Spanish Voyages to the Northwest Coast in the Sixteenth Century. Chapter IV: The Voyage of Juan Rodriguez Cabrillo." *California Historical Society Quarterly* 7, no. 1 (1928): 20–77. Accessed 10 June, 2021. https://doi.org/10.2307/25177918.
Wagner, Peter and Bernadette Rabuy. "Following the Money of Mass Incarceration." Prison Policy Initiative. January 25, 2017. Accessed 18 January, 2023. https://www.prisonpolicy.org/reports/money.html
Walker, Olivia. "Trabuco Dam Removal to Begin in Silverado and Holy Jim on the Cleveland NF." Public Affairs Officer, Cleveland National Forest. Accessed 7 September, 2020. https://www.fs.usda.gov/detailfull/r5/home/?cid=FSEPRD535980
Weise, David R. and Robert E. Martin. *The Biswell symposium: fire issues and solutions in urban interface and wildland ecosystems; February 15-17, 1994; Walnut Creek, California*. Southwest Research Station, Forest Service, U.S. Department of Agriculture, 1995. Accessed 20 April, 2021. http://dx.doi.org/10.2737/PSW-GTR-158
Weissman, Suzi. "Letting Malibu Burn. An Interview with Mike Davis," *Jacobin* (December 2, 2018). Accessed 27 June, 2020. https://www.jacobinmag.com/2018/12/california-fires-let-malibu-burn-mike-davis-interview
Westover, Robert Hudson. "Coming up in 2024: Smokey Bear turns 80." USDA Forest Service. December 14, 2023, Accessed 21 February, 2024. https://www.fs.usda.gov/about-agency/features/coming-2024-smokey-bear-turns-80

Wolfe, Patrick. "History and Imperialism: A Century of Theory from Marx to Postcolonialism." *American Historical Review*, v. 102, no. 2 (April 1997): 388-420. Accessed 6 November, 2020. https://doi.org/10.2307/2170830

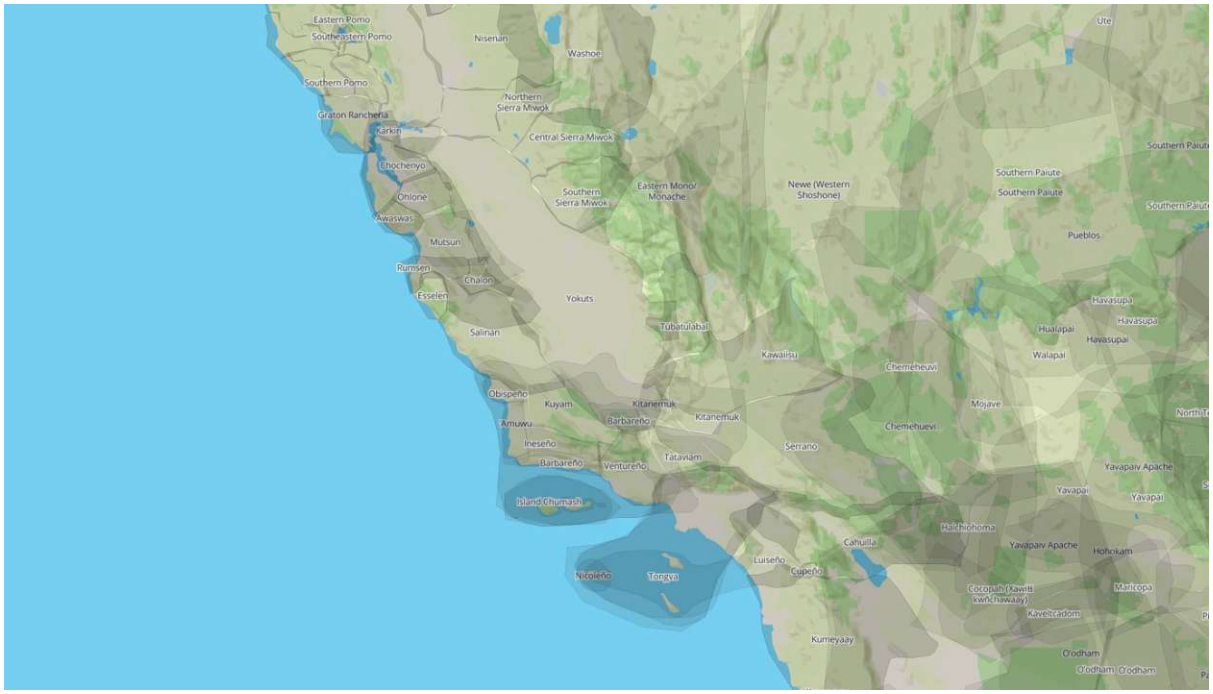
Wolfe, Patrick. "Land, Labor, and Difference: Elementary Structures of Race." American Historical Review. 106 (2001): 866–905. Accessed 6 November, 2020. https://doi.org/10.1086/ahr/106.3.866

Wolfe, Patrick. "Settler Colonialism and the Elimination of the Native." *Journal of Genocide Research* 8 (4) (2006): 387–409. Accessed 6 November, 2020. doi:10.1080/14623520601056240.

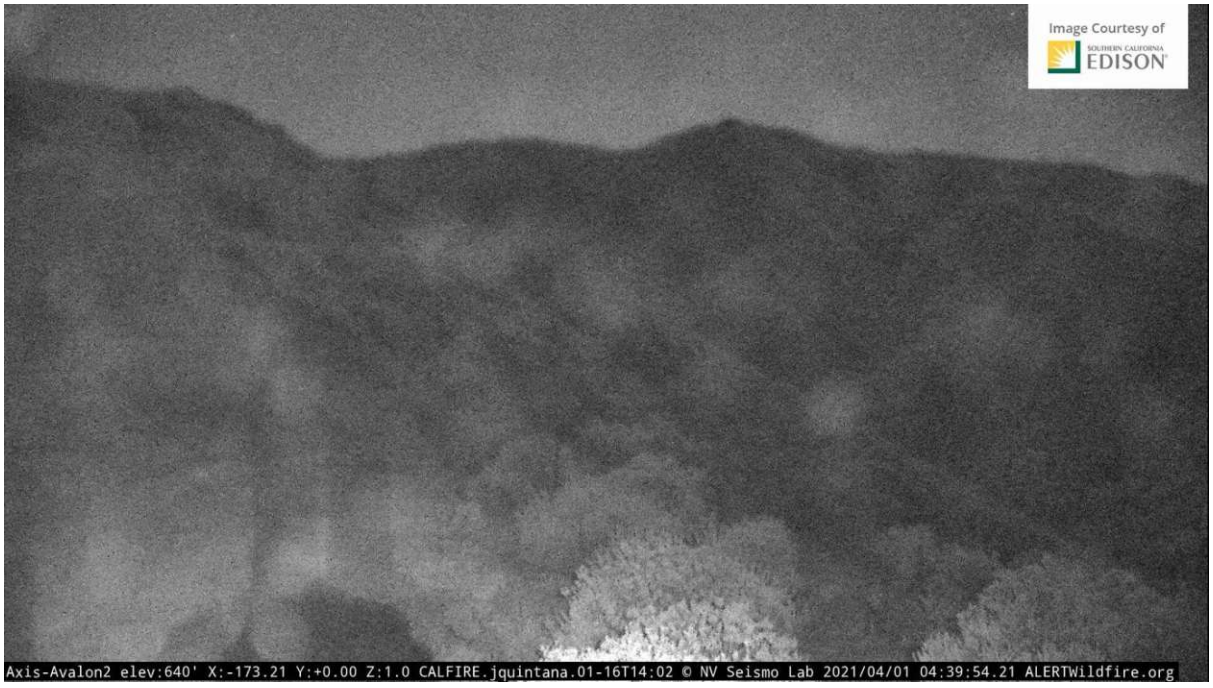
Wolfe, Patrick. *Settler Colonialism and the Transformation of Anthropology: The Politics and Poetics of an Ethnographic Event*. Cassell, 2011.

Wolfe, Patrick. *Traces of History: Elementary Structures of Race*. Verso, 2016.

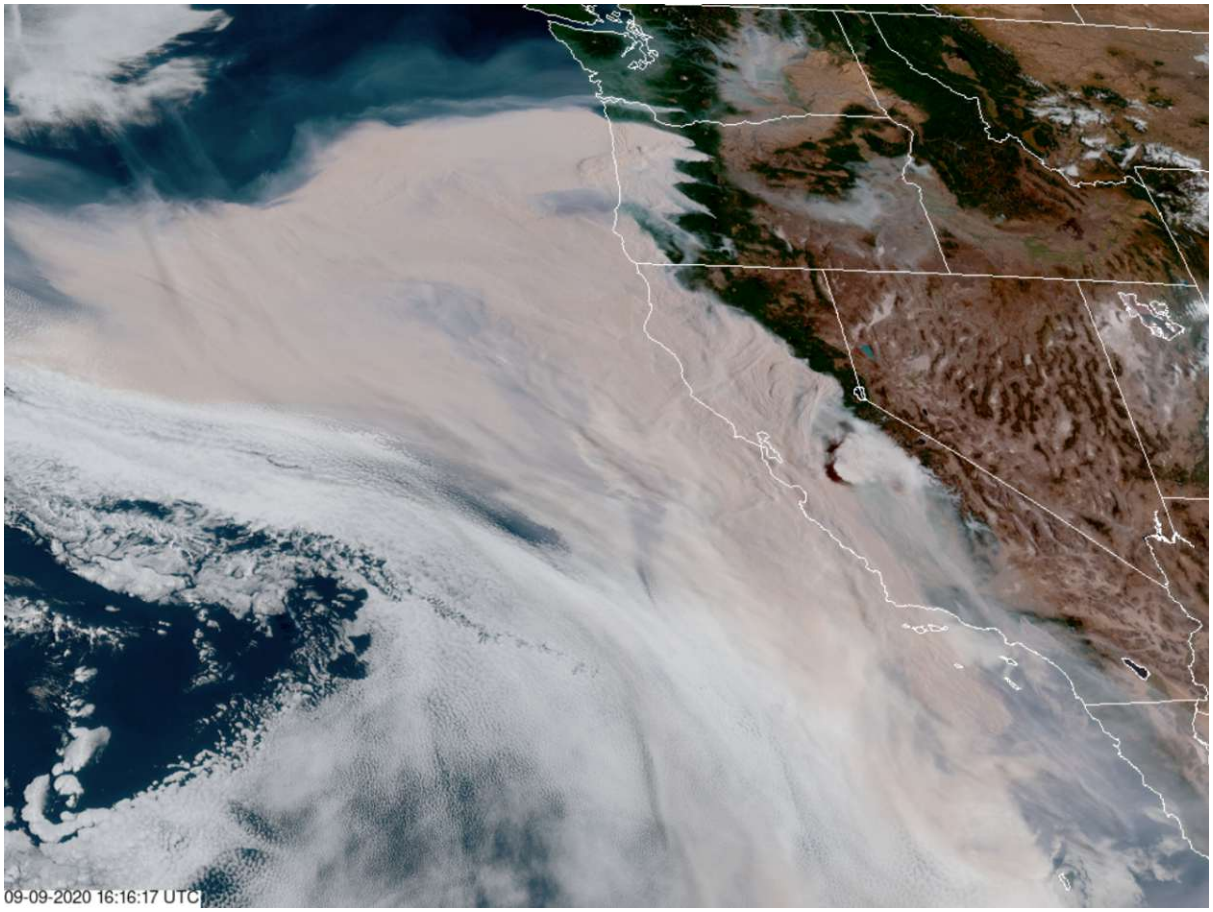
i. Map of the coast. View of Indigenous Homelands. 8 October 2020. [https://native-land.ca/]



ii. Surveillance. 1 April 2021
ALERTCalifornia. UC San Diego. (Previously ALERTWildfire.)
[https://cameras.alertcalifornia.org/?pos=37.2382_-119.0000_6&id=Axis-Arcadia1]



iii. September 9, 2020, the National Oceanic and Atmospheric Administration/ Cooperative Institute for Research in the Atmosphere released an image. 2020-09-10 – Massive smoke layer consumes Pacific West Coast – GOES-17 GeoColor [https://rammb2.cira.colostate.edu/] NOAA/CIRA/RAMMB



iv. Cultural Burning Workshop, Jack Kirk Estate. 19 February 2022. Southern Sierra Miwok Homelands. (Mariposa County)

v. 18 February 2022. Southern Sierra Miwok Homelands. (Mariposa County)