CONSERVATION BANKING IN CALIFORNIA: UNEVEN DIVIDENDS

Gregory Anderson Phipps

St Edmund Hall

University of Oxford

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ABSTRACT

Critically engaging with a political ecology analytical framework and the neoliberalization of nature in the form of the U.S. market-based biodiversity banking model, this thesis draws attention to the ways in which conservation banking in California results in inequitable distribution of benefits and costs among its broad network of human and nonhuman actors. Drawing upon two case study conservation banks in California's San Joaquin and Coachella Valleys, the thesis argues that the state's conservation bankers multiply their economic and socio-political benefits through diversification of value streams and capital accumulation. Meanwhile, the different nonhumans involved derive more or less benefit depending somewhat upon how charismatic and commodifiable they are, rather than purely upon the broader role they play in biodiversity. The state's governance approach to conservation through this model is simultaneously progressive, conservative, and neoliberal, in that it acts as a forerunner in U.S. conservation banking, yet adheres primarily to a traditional species-focused environmentalism mindset that favors a minority of nonhuman and human elites. California's conservation banking program aims to conserve biodiversity while facilitating robust and broad economic development, yet the nature privatization and commodification involved actually reinforces neoliberal modes of benefit consolidation.

It is hoped that this analysis will encourage biodiversity banking scholars to take a wider view of the diversified value bankers derive beyond the sale of market credits, and prompt governance entities to consider the way nonhuman charisma and affect influence the extent to which favored species—rather than ecosystems—are conserved in an endangered species-focused paradigm.

Keywords: Neoliberalization of nature; conservation banking; biodiversity; commodification; market environmentalism; neoliberal governance.

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LIST OF ABBREVIATIONS

ACTCB	Agua Caliente Tribal Conservation Bank
BBOP	Business and Biodiversity Offsets Programme
CDFW	California Department of Fish and Wildlife
CEPA	California Environmental Protection Agency
CESA	*California Endangered Species Act* of 1970
COE	U.S. Army Corps of Engineers
CUREC	The University of Oxford's ethics guidelines
EPA	(U.S.) *Environmental Protection Agency*
ESA	*Endangered Species Act* of 1973
HCPB	Habitat Conservation Planning Branch
KWBACB	Kern Water Bank Authority Conservation Bank
OEM	Office of Environmental Markets
REDD+	Reducing Emissions from Deforestation and forest Degradation
RIBITS	Regulatory in Lieu Fee and Bank Information Tracking System
TEEB	The Economics of Ecosystems and Biodiversity
THCP	Tribal Habit Conservation Plan
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

CHAPTER ONE:

INTRODUCTION

1.1 Introduction to Biodiversity Banking

Neoliberal conservation is a paradigm for conserving nonhuman nature that involves privatization, marketization, and the commodification of nonhumans and ecosystems (Fletcher, 2010; 2020). It has been described as a set of related approaches and mechanisms that aim to make conservation compatible with capitalism and economic development, through using market-based models as tools for financing conservation (Brockington and Duffy, 2010; Büscher and Arsel, 2012). Some examples include payments for ecosystem services, Reducing Emissions from Deforestation and forest Degradation (REDD+), carbon offsetting and trading, and biodiversity derivatives (Büscher and Arsel, 2012). The market- and economics-based terminology that is involved reflects the neoliberal rhetoric and political influence that has driven neoliberal conservation's evolution at least as much as has advancement in the ecological sciences (Coralie, 2015).

Situated within this wider trend has been the development of biodiversity banking. It is a market-based conservation model intended to compensate for the adverse impacts of development on biodiversity, with the goal of maintaining or even improving on current biodiversity levels (Gardner, 2013). This approach usually involves implementing offsets that support and protect biodiversity at a conservation location, which functions as the 'bank', in order to compensate for the corresponding loss of biodiversity that has occurred at a development location elsewhere (Bull et al., 2013).[1] The term biodiversity banking is sometimes alternatively referred to as biodiversity trading, species banking, conservation banking, mitigation

[1] Such as due to construction of infrastructure, housing, or commercial buildings.

banking, compensatory habitat, set-asides (Gibbons and Lindenmayer, 2007), and biodiversity offsets (Habib, 2013). However, these terms are not truly interchangeable; rather, most represent a particular aspect or version of biodiversity banking. The terms can also be country-specific.

Inspired by 1990s initiatives such as the U.S.' mandate for "No Net Loss" of biodiversity and the European Union's "Natura 2000" network of protected areas, the concepts of offsetting and biodiversity banking have grown in prominence in the international political, business, conservation, and academic arenas (Apostolopoulou and Adams, 2017; Kistenkas, 2014). Since the 2000s this has evolved further and extended globally with prompting from international initiatives like the Business and Biodiversity Offsets Program (BBOP) and the Economics of Ecosystems and Biodiversity (TEEB) program. In an effort to integrate economic development with biodiversity conservation, various biodiversity banking and offsetting mechanisms have increasingly been incorporated into national and regional biodiversity strategies. Madsen et al.'s (2010) report on the "State of Biodiversity Markets" identifies 39 such programs worldwide that either already exist or are being developed, in diverse countries such as Brazil, Australia, South Africa, Malaysia, Canada, the UK, and France.

Focusing in: Conservation Banking in California

In the U.S., a biodiversity banking industry worth approximately USD $3.6 billion per annum has evolved; the majority of that has been focused on 'wetland mitigation banking', whose growth has been driven by wetland ecosystem conservation requirements linked to the *Clean Water Act* of 1972 (Bennett et al., 2017). Following from that, the U.S.' 'conservation banking' program subsequently evolved as a separate compensation mechanism for offsetting impacts to individual land-based species listed under the *Endangered Species Act* of 1973 (ESA);

its market share of the above valuation is USD $354.2 million per annum (Bennett et al., 2017). Conservation banking has distinguished and even distanced itself from mitigation banking, having different legislative instruments, policy frameworks, and agencies in charge of implementation (Boisvert, 2015).

California has been a geographic heavyweight of U.S. conservation banking ever since the 1990s; out of the 127 conservation banks in the U.S., 108 are located in California (Poudel et al., 2019; 'RIBITS', 2018; U.S. Fish and Wildlife Service, 2018). In fact, the first conservation banks in the U.S. were established in California, and the state's trailblazing of the sector came about in large part out of necessity due to California's having enacted the *California Endangered Species Act (CESA)* of 1970 (three years before the U.S. federal *Endangered Species Act*). That *Act* affected the state's land use policy and regulation, because it pushed local governments in California to legally require developers to compensate for adverse impacts to species habitats resulting from their development projects. This intersected with the fact that California has the most land development activity of any U.S. state, due to the need to accommodate its population of 39.5 million people and a particularly capitalistic political economy (U.S. Department of Commerce, 2017).

Conservation banking in California was thus seen by the state as a potential mechanism for generating a ready supply of compensatory conservation credits, which would in turn facilitate CESA-compliant investment in California's economy by land developers (Mann and Absher, 2014). That is, by making compliance more convenient, California reduced a barrier to attracting development capital investment even while being an especially pro-environment state (Hubbard, 2021). This combination of conservation and economic development within the neoliberal political economy of California makes the state and its conservation banking program

poignant and interesting as geographical focal point of doctorate-level research; I expand further on the relevance of this research next.

Neoliberal Conservation in California: A Research Focus Whose Time Has Come

> "Conservation will ultimately boil down to rewarding the private landowner who conserves the public interest"—Aldo Leopold (1934).

Biodiversity banking is growing in importance, as is market environmentalism. Within this space, conservation banking is a model currently promoted for reconciling the conservation of species' habitats *on privately-owned land* with the often-conflicting interests of private land owners. Seventy percent of species on the *Endangered Species List* rely on habitat located on private lands (Brown and Shogren, 1998; Poudel, 2019), and 53 percent of California's 100.2 million acres are privately-owned (Congressional Research Service, 2020). And yet, the U.S. conservation banking model is entirely dependent upon sufficiently incentivizing those private land owners to undertake conservation on their valuable land rather than devote it to more traditionally profitable uses. Without significant economic incentives, land owners often avoid conservation activities that might attract burdensome endangered species onto their land (Lueck and Michael, 2003).

Existing literature has not adequately recognized that sales of conservation credits alone cannot not generate sufficient profit to equal the necessary incentive; conservation bankers in California require additional benefits through diverse value streams and various resource privatizations and enclosures—including those facilitated by the neoliberal state—to reward and motivate their participation. However, this incentivization via diversified value and capital accumulation streams also exacerbates the inequity with which the benefits and costs are distributed amongst conservation banking's socioeconomically and racially diverse stakeholders.

Doctorate-level research on conservation banking in California is therefore relevant, instructive, and timely, because the inequities that can result involve issues of social and environmental justice. While discourse on these justice issues as well as the neoliberalization of nature and market-based conservation models have been engaged with for years (e.g. Castree, 2008; Czech, 2001; Heynen and Robbins, 2005), issues of social and environmental justice and biodiversity loss now seem more urgent and timely than ever. The escalation in incidents of social unrest that occurred in 2020, and environmental change-based wildfires in 2021 in California from which ecosystems require decades to recover (CDFW, 2021) are just two examples of the heightened urgency of those discourses. Yet there is also a need for research recognizing how intended solutions like conservation banking risk exacerbating social inequality in California. Holmes and Cavanagh (2016) have shown that neoliberal conservation models have a tendency to interact with pre-existing inequalities in ways that broaden the unequal distribution patterns of the benefits and costs.

Additionally, with conservation banking in California having now been actively implemented for 25 years, enough time has passed to finally enable a closer examination of how the program's benefit and impact patterns amongst humans and nonhumans can inform the development of recommendations for now improving the program. Indeed, this research enables me to develop and lay out such recommendations in my conclusions (Chapter Eight). Because these recommendations will have implications and potential applicability both beyond California, and beyond conservation banking, the research that I outline next will be of pertinent interest to broader conservation scholars.

1.2 Research Questions, Research Design, and Analytical Framework

The primary research questions that drive this thesis are as follows:

1. What is conservation banking in California, from where did it evolve, and how does it function?
2. How are the costs and benefits of conservation banking in California distributed amongst its human stakeholders?
3. How are the costs and benefits of conservation banking in California distributed amongst nonhumans?

The research design that I have chosen for answering these research questions involves a case study approach, which Bell (1999, p. 10) views as "particularly appropriate for individual researchers because it gives an opportunity for a topic to be studied in some depth within a limited time scale." I have thus focused on two case study conservation banks: The case in Chapter Five interweaves the enclosure of 20,000 acres of central California land as a protected area and conservation bank with the privatization and enclosure of a water bank. Here the water transport and wetland features related to the water banking have been incorporated into the conservation bank habitat design to support numerous waterfowl and amphibians, among other species.

The case in Chapter Six involves a conservation bank enclosed within an indigenous American tribe's southern California reservation land, which facilitates a type of decolonization scenario while it conserves diverse species native to California's Coachella Valley. I introduce, justify and discuss both cases in much more detail in Chapter Three. The qualitative methods employed for my data collection have included semi-structured interviews, observations, review of archival materials, and photography. Part of the research design included my living within the local communities of each of these case study banks during the fieldwork period. This was done

to facilitate building a rapport with the case study stakeholders, and to learn about how the conservation banks impact their daily lives.

I note that while much of these data collection activities were planned out in advance of the fieldwork period, early analysis during the course of the fieldwork further shaped and expanded data collection opportunities; for example, reflection on initial interviews often helped me to discover unanticipated resources such as additional interviewees and archived documents. In all of the data collection activities, careful attention has been paid to following ethics standards that comply with the University of Oxford's ethics guidelines (CUREC), such as obtaining informed consent from the research participants, and anonymizing personal information relating to individual participants.

I have chosen to undertake coding and analysis of the collected data using NVivo software because of its suitability to mostly non-numeric, unstructured data. Coding was done with an emphasis on identifying and classifying themes in accordance with recommendations on coding from Maher et al. (2018) and Saldaña (2015). This involved identifying common themes that occur across interview responses, observations, photos, and archived materials, and using these as an organization and interpretation tool. Analysis of the research findings included continuous reflection on the role and influence of my positionality, and this is discussed in detail in Chapter Three.

Analytical Framework

I use political ecology as the analytical framework to process the data collected and to answer the research questions, because of its focus on the relationships between political, economic and social factors with environmental issues and interventions. Conservation banking

in California *is* political as well as economic, and a political ecology framework appropriately bridges the analysis of this ecological conservation model with the political economy in which it is situated (Robbins, 2012).

The field of political ecology has advanced, and expanded significantly into sub-specializations, since the late 1990s; I certainly draw substantially on these recent developments throughout the course of this research. However, an early, core premise of political ecology remains true and relevant, and plays a foundational role underlying the direction of my work. Specifically, political ecologists Raymond Bryant and Sinead Baily (1997) argued that:

1. Environment-related changes do not affect all stakeholders in a homogenous way; the costs and benefits are distributed unevenly.

2. This unequal distribution of costs and benefits may reinforce, reduce, or increase pre-existing inequalities, and the altered power relationships which result will have political implications.

Conservation banking, as one of the neoliberal approaches to conserving biodiversity that relies jointly on privatization, marketization, and capitalist land owners, is a compelling focus of research because some nuanced aspects of its workings in California are not widely understood, and because it involves potential clashes between the interests of individuals and wider ecologies. By answering my research questions through a political ecology framework, and through augmenting this with work on decolonialism and more-than-humanism, I am able to examine dimensions of conservation bank functioning and impacts that have not received significant previous attention. These include ecological aspects, but also extend beyond them to

the neoliberal economic and political drivers and justice ramifications of conservation banking in California.

More specifically, I illuminate how conservation bank owners multiply their economic and socio-political benefits through diversification of value streams and capital accumulation, while benefits and costs are unevenly shifted over to the humans and nonhumans around them. Applying more-than-humanist approaches to answering the research questions results in understanding how the different nonhumans involved benefit more or less in ways that often relate more to how charismatic and commodifiable they are than to their role in biodiversity. Applying attention to indigeneity, the complexity of indigenous practices, and decolonial considerations to answering the research questions reveals how an indigenous group can benefit from protected area conservation on their reclaimed land in unexpected ways that 'flip' patterns commonly described in the political ecology literature.

Analysis through a political ecology framework also gets to the heart of what is 'political' about conservation banking. In particular, it shows the neoliberal state to be a frequent orchestrator or puppet master of the consequential actions, even though the neoliberal agenda claims an intent to reduce the state's direct involvement in conservation and related responsibilities (Bello, 2017; Brockington et al., 2012). This is true for each of the case studies, but application of the framework also helps unearth contrasts between them in terms of who the state works *through* to influence events. For example, in one case, it is the classic white capitalists; in the other, it is an indigenous American tribe who come to assimilate some capitalist behaviors.

1.3 Contributions to Existing Work

There has been a fair amount of research undertaken on biodiversity banking and market environmentalism (e.g. Bakker, 2014; Boisvert, 2015; Fox and Nino-Murcia, 2005; Gamarra et al., 2017; Grimm, 2021; Mead, 2012; Ruhl et al., 2005), and I draw on such work throughout my research. However, as I alluded to in Section 1.1, there are also several consequential gaps in the existing literature, and my thesis helps to fill these gaps.

First, with the exceptions of Mann and Absher (2014), Lawrence (2001), and just recently Grimm (2021), authors have not focused research specifically on conservation banking in California. This is despite California's being the birthplace of U.S. conservation banking, as well as it being one of the most conservation bank-dense locations in the world. Furthermore, Mann and Absher's focus is only on broader policy design and uses California's conservation banking program policy as an example case of how conservation policy is formed; Lawrence looks only at the very first conservation banks established in the 1995 – 1996 period. Grimm's focus is specifically on evaluating the offsetting performance of two California banks based only on digital review of governance agency reporting documents. There remains a need for research that directly examines California's conservation banking model, governance and ramifications, recognizing that these are rather unique amongst the broader sector, yet also have wider implications. My research contributes this as the first of its kind for California.

Second, my analysis of California conservation banking shows that, consistent with the state's strong neoliberal tone, the state is initially quite involved as an orchestrator and facilitator of conservation – capital accumulation schemes benefitting and enriching its elite citizens, but then takes a more hands-off approach to subsequent regulation (Mann and Absher, 2014; Rea, 2017). This contribution becomes important for putting into perspective the relatively minor

influence of the market in California's conservation banking (such as in terms of 'self-regulation'), as well as for informing consideration of its conservation banking governance and recommendations for improving it (Dempsey, 2016). That is, if the 'market' offers little self-regulation function, and the state invests little in state-based regulation capacity, then each conservation banker has so far been left to largely self-govern in their own interests.

Third, existing literature on conservation banking and even some other market-based conservation models has taken a narrow view of the value derived from them, presuming this to be only the profit from sales of credits. However, I contribute a more comprehensive perspective that shows California conservation bankers cultivate and derive diverse forms of economic, social, and cultural value in line with that of Bourdieu's (1986) forms of capital that largely determine peoples' social position. I show that these come about in part through facilitation by the neoliberal state, and in part through the bank owners' furtherance of capitalist accumulation and diversification strategies.

Fourth, political ecology literature has often found the pairing of indigenous groups and enclosure of land as protected areas to prove problematic (e.g. Beitl, 2012; Rai et al., 2019). However, my contribution examining a conservation bank in southern California that appears to have benefited an indigenous American tribe through a type of decolonization effect demonstrates that outcomes from such combinations are not inevitably negative. At the same time, this examination also brings needed attention to considering how, and on whose terms, the 'success' or even justice of indigenous conservation is defined or interpreted.

Fifth, while authors including Barua (2017, 2019), Collard and Dempsey (2013), and Lorimer (2007, 2009) have done significant work on nonhuman charisma and affect through a

political ecology lens, there remains a valuable opportunity to build on their work through exploration of these issues as they relate specifically to conservation banking. This is a unique application, yet germane given the central role a vast array of nonhumans plays in the ecology of conservation banks, even while certain species are preferentially conserved for reasons other than the ecological. In contributing an investigation into the role that charisma and affective labor have in influencing which species are prioritized in the activities of California conservation banks, I show that the bank owners employ species' charisma to both enhance and safeguard the benefits they derive, such as through cultivating public and state support even when the bank owners undertake unpopular peripheral activities. Thinking toward policy implications, this 'political' use of species' charisma and affective labor in conservation banking has been in need of research attention because it greatly influences decisions about how the conservation is implemented and governed.

1.4 Thesis Structure: An Introduction to the Chapters and the Argument

The thesis is presented in eight chapters, with this Introduction serving as Chapter One.

In Chapter Two, I review the relevant theoretical topics, background, and literature debates whose issues have come to be reflected in practice in the character and functioning of conservation banking in California. The first aspect of this review involves establishing the political context into which conservation banking is situated, through briefly tracing how early trends in the development of environmentalism in the U.S. lent characteristics to it that endure to this day. This includes literature examining the historical emphasis on endangered species and sport hunting (Dunlap, 1988), as well as the growth of an idea that the neoliberal politics evolving during the 1970s and 1980s could be applied to form market-based, neoliberal conservation models. The second aspect concerns looking at literature discussing the roles of nonhuman

charisma and affective labor in influencing the politics and equity of conservation activities. The final component involves discourse on the intersection between decolonial political ecology, indigeneity, capitalism, and market-based conservation.

In Chapter Three, I present the research design, methodology, and methods employed for this thesis. These are drawn from political ecology research, and inspired by the theoretical and empirical work of economic geographers emphasizing the combination of development with finance (Bakker, 2012; Robertson, 2006, 2012). I show that this approach is appropriate given that conservation banking involves a financialization of nature to compensate for ecological compromises resulting from development. I then lay out the methodological approach, which being based in case studies is well-suited to addressing my research questions given that they require depth more than breadth to answer (Crowe et al., 2011). I detail the methods I employed to collect the data, the types of data collected, how I analyzed the data and wrote up the results, and the roles positionality and reflexivity played in the course of my undertaking my fieldwork, data analysis, and writing up.

In Chapter Four, I present the first of my analytical chapters. I argue that conservation banking, being a concept whose interpretation and implementation is variable by region, is accordingly distinctive in California with a primarily species-focused approach evolved from the classic origins of American (settler)[2] environmentalism. I provide a high-level overview of conservation banking in California that traces the history of how it evolved from political developments in human – nonhuman relations and Californian capitalism and then neoliberalism. I then outline the current political economy of conservation banking in California, analyzing its governance approach and how the banking is implemented (research question 1). The chapter contributes insight not only into how conservation banking functions in California; it contributes

[2] As distinguished from existing practices of indigenous environmentalism.

needed attention to the functional and geographic plurality of 'conservation banking' as a term, concept, and model (Madsen, 2010, 2011).

In Chapter Five, I present the first case study, focused on the Kern Water Bank Authority Conservation Bank. I unpack the diversified forms of value extraction and capital accumulation, including but also going beyond the sale of conservation credits, that are cultivated by the bank's capitalist owners. I analyze how the neoliberal state's trade of privatized control over water in exchange for the bank owners' establishment of the conservation bank facilitates wealth creation for California's elite. I contend that the case exemplifies the production of multiple streams of economic, cultural, and social benefit as per Pierre Bourdieu (1986) which, in a synergistic fashion, offer more rewards than could be gained from any of these individual value streams alone (research question 2). I also introduce how the owners of the Kern Water Bank Authority Conservation Bank, like many conservation bank owners in California, benefit most when they prioritize conserving endangered-listed and charismatic species rather than wider ecologies, due to California's mandating and rewarding preferential treatment for endangered-listed species.

In Chapter Six I present the second case study, focused on the Agua Caliente Tribal Conservation Bank. I first examine how a negotiated exchange between the U.S. federal government and the Agua Caliente Band of Cahuilla Indians resulted in the Tribe establishing the conservation bank, while in return gaining beneficial entry into the casino business. I then unpack and analyze the case's complex socio-economic mix of indigenous American conservation, sovereignty, and identity recognition politics, and indigenous decolonization and capitalist assimilation. I argue that for the Agua Caliente Tribe, neoliberal state policies that packaged privatized conservation quota-like mandates with capitalist economic development schemes have created an unusual type of decolonization mechanism for them in the form of the

conservation bank. It facilitates their derivation of diversified value, self-determination, food security, artistic expression and activism, and continuation of an indigenous knowledge-based relationship with non-human nature via market-based conservation (research question 2).

In Chapter Seven, I revisit both case studies from Chapters Five and Six in order to focus specifically on the nonhumans involved. I analyze how endangered-listed and charismatic species tend to be preferentially emphasized, and also somewhat commodified, by conservation banking in California—while broader ecologies may be overlooked. I contend that in California's conservation banking program, the state's mandated prioritization of endangered-listed species, combined with the influence of species' charisma and affective labor, incentivize such commodification and the abstraction of nonhuman nature as a means for bankers to compete and succeed in the sector. I show that rather than always supporting biodiversity, the emphasis on these dynamics in California's approach sometimes compromises the interdependent ecologies involved. To accomplish this, Chapter Seven follows the nonhumans through a conservation pathway. It first traces how species become 'endangered' listed (Ando, 1999, Brosi and Biber, 2012). It then analyses the commodification that endangered-listed species undergo as they move through California's conservation banking system. The chapter concludes by analyzing possible consequences of this species commodification in terms of their abstraction from ecological relations, spatial connections, and temporal relations (research question 3).

Bringing this research to a close, in Chapter Eight I draw upon findings across chapters Four through Seven to assemble conclusions that emerge from considering the neoliberal evolution of conservation banking in California, and the governance-related challenges identified in the two case studies (Bunton, 2005). I highlight the contributions made by this thesis toward:

1. Illuminating what conservation banking is in California, how it evolved into its unique present Californian form, and how it really functions there (Research question #1);

2. Rethinking the ways conservation bankers are able to derive multiple forms of economic, cultural, and social value as benefits from their activities, and explaining how this influences the distribution of benefits and costs amongst conservation banks' broader stakeholders (Research question #2); and

3. Recognizing pathways through which nonhumans are impacted by their commodification and the attention directed toward their charisma and affective labor by conservation banking's human stakeholders, to help understand how this all influences the distribution of benefits and costs amongst conservation banks' broader nonhuman participants and ecologies (Research question #3).

I process the conclusions to offer a set of recommendations for potentially improving governance policy and implementation through addressing some of the shortcomings and injustices observed, while still preserving and supporting the valuable, constructive actions already occurring in California's conservation banking program. These recommendations are conceived to have broader application beyond California (Briggs et al., 2009), and perhaps even beyond conservation banking, to other forms of conservation. Finally, I indicate potential limitations of this research, and potential avenues for relevant future research.

CHAPTER TWO:

LITERATURE REVIEW: MAPPING THE POLITICAL ECOLOGY OF NEOLIBERAL ENVIRONMENTALISM IN THE UNITED STATES OF AMERICA

Introduction

This thesis undertakes a critical examination of conservation banking in California, through the lens of a political ecology conceptual framework. On the one hand, the topic is situated in the national and global literature on market-based conservation models. On the other hand, California's—and indeed America's—political, cultural, and economic context is fairly unique and this shapes its conservation banking sector accordingly. I therefore review the literature specific to this region. Nevertheless, the sector shares in some of the underlying principles of the broader neoliberal environmental agenda, thus allowing this thesis topic to also draw on relevant, wider existing research, as well as enabling contributions to gap areas that are present in the literature at a more granular level.

Because market-based conservation strategies exhibit an assortment of complex social, political, economic, and environmental implications that lead to various human and nonhuman beneficiary groups being impacted differently, the literatures I utilize are drawn from different areas of the discipline of geography. These include work in the political ecology of conservation, the politics of landscape, the politics of value, decolonial political ecology, and nonhuman charisma and affective labor. Key concepts addressed within such literature areas are of particular relevance to answering my research questions and are consequently emphasized in the narrative of this chapter and those that follow, including: environmentalism, the neoliberalization of nature, enclosure, privatization, commodification, the financialization of nature in terms of value and valuation, and indigenous conservation.

The combination of political ecology and nonhuman charisma and affect, as applied to the context of my research on conservation banking, is unique and results in this thesis contributing an original application of what might be referred to as 'the politics of nonhuman charisma'. Previous work of authors including Lorimer (2007, 2009), Barua (2017, 2019), and Collard and Dempsey (2013) has, I believe, implied that nonhuman charisma and affective labor can indeed be political. The other combination I focus upon—that of political ecology, decolonization, and indigeneity—may initially appear less unique, having been addressed in existing work that has typically examined the impact of enclosure of land (as 'protected areas') on indigenous groups (e.g. Beitl, 2012; Rai et al., 2019). However, I contribute the examination of a more unusual and emerging reversal of this scenario whereby the indigenous American tribe benefits greatly from enclosure of their own land as a conservation bank.

2.1 Putting Conservation Banking in Context: A Short History of the Development of Environmentalism in the U.S.

Environmentalism and interest in conservation has a long and global history. However, for the sake of maintaining a manageable scale and concentrating on the background and literatures most relevant to answering my thesis' research questions, I review the background of environmentalism in the U.S. I do so primarily through a lens of political history. This proves to be illuminative in helping to make sense of why present-day market-based conservation functions the way it does. It also provides the necessary context for analysis of the evolution of California conservation that I present separately at the start of Chapter Four.

Before conservation as an ideological movement was taken up *politically* by the U.S. government, it was first taken up *culturally* by the American public (Grusin et al., 2004). Its first

entrée into American social consciousness came about largely through the 19th century naturalist-themed art and literature of the *preservationists* (Pinchot, 1937). As part of the preservationist movement, authors such as Henry David Thoreau and artists such as Frederic Church romanticized the natural beauty they observed in areas of the undeveloped American West, like Yosemite Valley in California. They painted adventuresome landscapes and wrote inspirational essays about masculine, naturalist themes (DeLuca and Demo, 2000; Naef, 2008; Slovic, 1999; Walls, 1995). This nature genre became socially fashionable, especially among American upper classes (Clark, 1981; Heckscher, 2002; Herring, 2004; Lubin and Lubin, 1994; Truettner, 1976). The aesthetic and spiritual values underlying the preservationist movement advocated maintaining some nature landscapes in their pristine state by never using those natures (Mertig, 2015).

Shortly thereafter, the more political *conservationist* movement grew, characterized by a less romantic, more pragmatic mindset. Comprised significantly of government bureaucrats, economists, and businesspeople, the conservationists were motivated by a desire to use nature and natural resources efficiently and sustainably[3], so these could continue to be available to support economic development (Perez, 2018; Stacy, 2000; Steel et al., 1990). In the conservationist movement, connections began to be recognized between politics, economics, and the environment. That is, whereas mid-18th century political economists such as Adam Smith recognized only the relationships between economic production and political processes, in the early conservationists we can see a building upon what late 18th century political economist Thomas Malthus would describe as the relationship between economics, politics, and the human population's use of *finite* environmental resources (Malthus, 1798; Smith, 1759; 1776).

Closely related to the conservationists, though a distinct early conservation group and movement of their own, were the politically-powerful, upper class American sports hunters. This

[3] At least relative to the times.

group, which has received comparatively less attention in the literature than the preservationists or the conservationists[4], was motivated by their desire to save enough game for continued hunting. Members such as Theodore Roosevelt had recognized that years of excessive killing of the commonly hunted wildlife had nearly eliminated some species, reducing sport hunting opportunities (Dunlap, 1988; Spiro, 2009; Silver, 2002; Sturgeon, 2009). Smalley (2005) states that this group's interpretation of 'conservation' was bound up in associations of masculinity with hunting, and envisioning conservation as 'by the numbers' regulation.[5] That is, controlled hunting quotas in defined spaces being equated as a gendered conceptualization of 'sportsmanship,' and thus conservation as being sportsmanlike.

Kelly (2018) and Geist et al., (2001) argue that the American sports hunters group was empowered by its members' domination of the periodical publishing market to steer public narratives about conservation, and by their domination of politics to steer conservation lawmaking. Consequently, they were able to drive political support to enclose, regulate, and conserve large land areas—and the fate of nonhumans upon them—as National Parks for the purpose of public enjoyment and recreational hunting, via Congress' establishment of the National Park System (Patin, 1999).

Institutionalization of Conservation

Yellowstone and Yosemite Parks were the first in this system and established a 'protected area' format that all subsequent National Parks replicated (Germic, 2001). The National Park System represented the U.S.' first major foray into institutionalized 'conservation'; Winks (1996) writes that the hierarchical class and gender dynamics from which the National Parks System

[4] Comparatively more literature exists that examines non-U.S., international sport-trophy hunting as means of supporting conservation—in less-developed countries.
[5] Controlling the number of species individuals that could be killed annually.

arose shaped the character that American conservation would carry forward as it evolved. During Theodore Roosevelt's presidency (1901 – 1909), he institutionalized and promoted the growth of U.S. conservation through enacting the first federal environmental laws and establishing the federal conservation agencies such as the U.S. Fish and Wildlife Service (USFWS) to enforce them and govern the National Parks System. These agencies emphasized preferentially protecting individual species important to him and his elite hunting peers, such as the Bison (Aune and Plumb, 2016; Dorsey, 1995; Pinkett, 1970).

Looked at in terms of the political ecology of conservation, and the distribution of benefits (as per my research questions), this trend most benefited the most powerful and elite human stakeholders. In deconstructing modern U.S. conservation's governance structure and the intentions of the men who designed its foundations, Dunlap (1988, p. 51) argues that:

> Their purpose was to assure a supply of game for sport hunting. The legal and institutional framework of wildlife protection in the U.S., formed between 1880 and 1920, is the legacy of sport hunters.

If less blatant in the 21st century, the relationship between U.S. conservation, parks, and the annual $38.8 billion in revenue (U.S. Forest Service, 2020) generated by sport hunting and fishing have remained so strong, that Arnett and Southwick (2015, p. 734) argue "the contributions of hunters serve as the foundation for a social and economic support system for conserving wildlife and habitats." Robbins and Luginbuhl (2006, p. 49) recognize this connection thus:

> Almost all U.S. wildlife management bureaucracies are closely linked to hunting constituencies. Indeed, conservation of wildlife in the U.S. began with hunting-inspired regulation, growing into state efforts to control the decline of the targets of sport and commercial hunting.

Looked at in terms of decolonial political ecology, this also influences which human stakeholders have disproportionately born the costs. Spence (1999, p. 83) notes that the so-called 'uninhabited wilderness' that the sport hunters' press claimed the U.S. National Park System would conserve actually had to be dispossessed of numerous indigenous American inhabitants before it could be enclosed with protected status. Keller and Turek (1999, p. 17) argue that preservationist artists had also contributed to and perpetuated the public's misperception of western U.S. lands that became National Parks as having been devoid of any human inhabitants by painting 'empty land.'

In truth, lands that were appropriated earlier (pre-1851) via colonial force or later under the *Appropriation Acts* of 1851 and 1871 because of their dense natural resources were frequently lands that had also been *the most inhabited* by indigenous Americans (Schulz, 2000). Such appropriation by the state had set up conditions conducive to later privatization of some of the resource-rich land under early neoliberalism in the 1980s. Early political ecologists such as Eric Wolfe (1974; 1982) characterized this as an example of colonial domination, whereas more recent political ecologists have recognized this as a familiar example of indigenous dispossession, enclosure, and a waste of indigenous conservation knowledge.

Over the next decades, presidents subsequent to Roosevelt maintained American conservation in that status quo paradigm. Rinde (2017) and Vickery and Peterson (2004) argue that it was President Richard Nixon, a native Californian, who enacted the environmental legislation most foundational to modern U.S. species conservation and conservation banking. In 1970, Nixon established the U.S. *Environmental Protection Act*, and created the Environmental Protection Agency (Glicksman et al., 2007). While not abandoning hunting legacies, these were groundbreaking and extended beyond them.

Prompted by campaign funders in California, Nixon then established the *Clean Water Act* of 1972, a key link in the eventual development of conservation banking because the *Water Act* formed the legal requirement for its pre-cursor: wetland mitigation (Hough and Robertson, 2009). That is, it instituted a permitting system requiring developers implementing projects on wetlands to obtain a permit of approval from the U.S. Army Corps of Engineers (COE); to earn that permit they had to agree to re-create an equal amount of wetland to compensate the loss of natural wetland (Robertson, 2004). Sussman and Daynes (2004) state that it was Nixon's subsequent *Endangered Species Act (ESA)* of 1973 that established the political, theoretical, and legal foundation upon which U.S. conservation programs going forward would be based.

Neoliberalization of Nature Conservation

President Jimmy Carter subsequently introduced the early beginnings of neoliberal legislation into the American political economy. Since neoliberalism has been interpreted and implemented somewhat differently on a context-specific basis, it is helpful to specify what the 'neoliberal' introduced by Carter, and furthered by presidential administrations that followed him, looked like. Vincent (2009) defines neoliberalism as a 20th-century revival of 19th-century thinking associated with economic liberalism and free-market capitalism, which promotes privatization, deregulation, globalization, free trade, and reductions in government spending in order to increase the role of the private sector in the economy and society. However, many would consider this interpretation incomplete; a variety of granular distinctions between liberalism and neoliberalism have been proposed by other authors. Some see liberalism as promoting a laissez-faire capitalism wherein the government remains largely *out* of the economy and instead allows individuals to freely manage their own economic affairs; they contrast this with a view of neoliberalism wherein the state appears somewhat detached but nevertheless maintains a strong ruling role over the economy even if from backstage (Mirowski and Plehwe,

2015). Phelan and Dawes (2018, p. 2) view neoliberalism more as a particular sub-type of liberalism, saying:

> If liberalism names the political ideology aligned to the historical emergence of 'free market' capitalism and Western-style representative democracy, neoliberalism signifies a particular regime of liberalism, capitalism, and democracy that has been globalized since the 1970s, in the form of an active state promotion of market and competition principles that critics see as antithetical to democracy.

Additionally, aside from distinctions between liberalism and neoliberalism, Springer et al. (2016, p.1) have noted that there is also a general lack of universal consensus on what the concept of neoliberalism means and even what disciplines it relates to, saying: "Neoliberalism is a slippery concept, meaning different things to different people. Scholars have examined the relationships between neoliberalism and a vast array of conceptual categories." Brenner and Theodore (2002) have also noted that tensions or discrepancies exist between theoretical definitions of neoliberalism, and how it is reflected in actual case examples.

Navarro (2020) recognizes that some such legislation initiated by the Carter Administration included the first hints at attempting to conceive how neoliberal, market-based approaches and privatization might be incorporated into American conservation activities. For example, Carter's 1977 *Executive Order 12044, Improving Government Regulations* and his 1980 *Regulatory Flexibility Act* directed U.S. regulatory agencies—including environmental agencies—to achieve their objectives while reducing direct government involvement by attempting transitions to private sector, market-based self-regulation (Costle, 1981). Similarly, Carter's *Program on Alternative Regulatory Approaches* recommended developing conservation alternatives relying on market forces to make regulation more cost-effective (Jessop, 2008).

Foster et al. (1991) and Loudon (2015) credit Carter with also first proposing the U.S. should have a "No Net Loss of Wetlands" goal, which launched the U.S. wetland mitigation program.

President Carter's broader neoliberal deregulation agenda, shifting government away from being the lead face of direct regulation, accelerated throughout the 1980s under President Ronald Reagan's administration. While Reagan is not associated with policies that specifically moved environmental conservation forward (Guber, 2003), his emphasis on tax cuts and tax incentives benefiting private capitalists were nevertheless important in moving forward a way of thinking about how to motivate private citizens to assume some responsibilities from which the neoliberal state prefers to be unburdened. In particular, this propelled the use of tax breaks for land owners as a means to incentivize behaviors deemed desirable according to a neoliberal agenda (Prasad, 2012); tax incentives would be increasingly repurposed to encourage environmental conservation by subsequent Presidents George H. W. Bush (the senior, 1989-1993), Bill Clinton (1993-2001), and George W. Bush (the junior, 2001-2009). I discuss the relevance of these mechanisms in direct relation to conservation banking in California, such as via conservation easements, in Chapter Four.

Although wetland mitigation had debuted as something of a limited test concept during the 1980s, it did not yet involve any banking, credit, or market components; the mitigation was on a case-by-case basis only (Greiner et al., 1994). If developers' projects caused harm to an area of wetland, those developers themselves directly implemented a nearby wetland habitat enhancement to compensate it, and a state agency (usually the U.S. Army Corps of Engineers) was supposed to check and approve the quality of the developers' compensation work. However, Baggett (2006), Hallwood (2007), and the National Research Council (2001) note these checks were frequently not done and quality was erratic at best. The Army Corps of Engineers (2018) discovered by 1989 that most developers had never even completed the required mitigation. As I

describe next, authors including Porter et al. (1996) indicate this was a federal embarrassment that President George H. W. Bush set out to correct by pairing the Army Corps of Engineers with the U.S. Fish and Wildlife Service to revamp the model to involve *banking*.

Taking Conservation to Market

The U.S.' market-based wetland mitigation banking was born and evolved as a model when hunting and fishing enthusiast President Bush Sr. had the U.S. Fish and Wildlife Service (USFWS) design an institutionalized mitigation program as an updated "No Net Loss of Wetlands" theme for his presidential agenda in 1990 (Porter et al., 1996). Gómez-Baggethun et al. (2010) state that the USFWS envisioned the mitigation banking model that would involve selling mitigation credits through a credit market as a way to shift responsibility for regulation of the mitigation *quality* from the state, to the market. Specifically, this rendered professional mitigation bankers, rather than the developers, responsible for mitigation quality. The model thus exemplified an increasing infiltration of neoliberalism into environmentalism through bringing privatized, enclosed nature to market, while simultaneously using the state's institutional framework to facilitate private land owners' capital accumulation (Robertson, 2004).

Since the 1990s and particularly since legislation introduced by President Bill Clinton (e.g. *Executive Order 12898*[6], 1994), the conceptualizations of 'environmentalism' and conservation have widened[7] (Schlosberg, 1999), such as increasingly including a focus on environmental justice as a movement that embraces *plural* definitions of the term 'environment' (Clayton, 2000). For example, recognition of urban areas as environments, and discussion of inner-city problems as an

[6] Directs federal agencies to address disproportionately high adverse environmental effects on minority and low-income populations.
[7] As compared with earlier emergence of a concept of 'environmental justice', though not yet termed thus, into popular consciousness in the 1960s and 1970s as demonstrated for example by the reception to Rachel Carson's *Silent Spring* (1962).

environmental issue (Novotny, 2000), illustrate how far the scope of environmentalism has broadened since 19th century preservationists focused only on untouched nature landscapes as 'the environment'.

Alongside such evolutions, and throughout the recent presidential administrations of Bush Jr., Obama, and Trump, U.S. 'neoliberal environmentalism' has only intensified (Stoner, 2020). The state continues to seek ever more ways to distance itself from direct involvement in conservation implementation and its regulation, such that it now even avoids regulation of the alternative to state regulation (i.e. the market), and of that market's operational components such as credit pricing (McCarthy and Prudham, 2004). Robertson (2012, p. 501) summarizes such challenges of the neoliberal environmentalism trend for market-based conservation thus:

> Potential market participants seek guidance from the state on appropriate commodity measures and pricing practices. Bureaucrats and economists, following the neoliberal preference for market governance rather than government, turn the tasks back onto civil society. The invocation of abstract rules, instead of the formulation of practical guidance, by policymakers means that the neoliberal marketization of non-market public goods is a contingent and sometimes rudderless task for those who must make the markets work on the ground.

Nevertheless, it is within the context of this challenging, nebulous, neoliberal environmental conservation landscape that market-based conservation of nature, and specifically conservation banking, is currently undertaken; consequently, I next look more closely at existing discourse on the neoliberalization of nature in terms of what it entails and what benefits and costs it may produce.

2.2 Market-based Conservation in the Neoliberal Era

Neoliberalization of Nature

Neoliberal conservation is an approach to conserving nonhuman nature through privatizing, marketizing, and commodifying nonhuman organisms and ecosystems. It is often characterized as the adoption of strategies and mechanisms that seek to reconcile conservation with economic development, such as by utilizing economic markets as a mechanism for financing conservation (Fletcher, 2020). As introduced above, the rise of neoliberal conservation has been but one component of more widespread processes of neoliberalization occurring across the global economy since the 1980s as an ideological response to counter the chronic stagflation of the 1970s (Karagiannis et al., 2013).

Neoliberal conservation has come about as part of that wider trend, but also in part as a response to a recognition of the growing environmental crisis; and as a response to arguments put forth by authors in academic disciplines such as environmental economics and then ecological economics (Baylis et al., 2008; Costanza et al., 2015; Lei, 2020). They have argued that attaching a price to negative externalities that contribute to the environmental crisis should induce private companies to help fund conservation. It has been seen as a way of rendering environmental conservation compatible with capitalism (Brockington and Duffy, 2010; Büscher and Arsel, 2012). In neoliberal conservation, nature and natural resources are often represented as capital credits, units of information, or services, abstracted from their material ecological relations to facilitate their flow through pathways of credit and finance as commodities (Dempsey and Robertson, 2012).

Some of the neoliberal market mechanisms for conservation that have been developed in recent years include payments for ecosystem services, Reducing Emissions from Deforestation and forest Degradation (REDD+) and carbon offsetting and trading, biodiversity derivatives, and conservation banking (Buscher and Arsel, 2012). Corbera et al. (2021a, 2021b) note that, globally, the markets for these mechanisms have exhibited a wide range of failures and successes, both in terms of policy design and outcomes. For example, environmental economists Frank Convery and Luke Redmond (2013) argue that the U.S.' wetland credit markets and sulphur dioxide credit markets have been stable and fairly robust, whereas carbon markets under the European Union Emissions Trading Scheme struggled in their early years, and have continued to weaken whenever energy demand decreases. Since around 2014, some neoliberal conservation policies have lost support, yet new or revamped ones continue to arise. Dempsey (2016, p. 237) states that "We remain in a kind of neoliberal waiting room…. Neoliberalism … is always failing forward, and we just have to wait for the next policy train."

Authors with favorable views of neoliberal approaches to nature conservation have often argued that market-based mechanisms provide a preferable alternative to the direct government implementation of conservation, which they see as inefficient (Logue, 2006; Ernst, 2004; Chichilnisky and Heal, 1998). Such authors' position is based on some of the following neoliberal assumptions: private property rights should be revered; the environment should be viewed as an asset which can be assigned an economic value; environmental choices should be made based upon costs and benefit analyses rather than government mandates; and competition, efficiency, individualism, and private enterprise are essential components of accomplishing environmental protection if economic expansion is to be simultaneously maintained (Barry, 2002).

An overarching premise of the above assumptions is that disengaging government, thus the state, from conservation management removes intrusive bureaucracy from the processes. However, Erik Swyngedouw (2005, *pp. 55–56*) calls this premise:

> one of the central myths of the neoliberal model, i.e., that privatization means getting the state off the back of the economy and rolling back regulatory red tape. In contrast to this often-repeated refrain, the state or other governing arrangements are centrally involved in 'regulating' and 'organizing' privatization and dispossession.

One of the contributions of my analysis of California conservation banking is the revealing that, despite the neoliberal economic and political climate, the state is nevertheless involved as a behind the scenes 'orchestrator' of California conservation programs and markets, and active facilitator of conservation – capital accumulation schemes benefitting and even 'creating' the wealthiest citizens. California conservation banking therefore exemplifies Swyngedouw's assessment.

Swyngedouw's critical view of neoliberal[8] models for conservation, including conservation banking, is echoed by a number of other authors; some of their criticism tends to focus on issues of efficacy, and some on issues of principle. Those focused on efficacy, such as Burgin (2010) and Mills (2003), have suggested that market-based conservation has failed to demonstrate the effectiveness promised by its promoters. Those focused on principle, such as Apostolopoulou and Adams (2017) and Gordon et al. (2015), argue that neoliberalizing nature crassly reduces it to fungible, commodified credit units, and incentivizes bank owners to profit from the sale of those credits without accountability for whether the transactions fully offset biodiversity losses from development projects. Adams (2017) is

[8] For the purposes of space efficiency in this chapter, 'neoliberal conservation' and 'market-based conservation' are used somewhat synonymously, although this is a slight oversimplification.

also critical of neoliberalized conservation on principle when it leads to overly cozy, Faustian arrangements between conservation implementers and the corporate sector. I show in Chapters Five and Six that California conservation banking ownership is, itself, often corporate (but private).

Additionally, feminist political ecologists such as Vandana Shiva (2016b, 2013) and Val Plumwood (2005) have questioned the ethics and validity of buying and selling *ownership* of nonhuman nature or even abstractions of it; Shiva contends that selling nature implies ownership of it, but that nature can never be owned by anyone other than the Mother Earth. Plumwood argues against dualistic subordination and ownership of nature using capitalist constructs such as money, markets, and property because she sees these as gendered constructs agreed on primarily by an elite few, but forced onto all.

An underlying theme behind all of these arguments is that neoliberal conservation both implies and can perpetuate the kind of inequalities which political ecologists find most troubling (Fletcher, 2010). For example, presuming the power to control, buy, and sell nonhumans implies that they are inherently under human and state dominion, thus rightfully subject to whatever costs or benefits this brings upon them. Political ecologists also object to the presumptions of human-over-human dominion involved in neoliberal conservation models. Holmes and Cavanagh (2016, p. 199) argue that "neoliberal conservation often involves novel forms of power" which seek to oblige local (non-state) level groups and individuals to take on and reflect conservationist and neoliberal economic values. I posit that such a hierarchical relationship pathway that can be traced from the neoliberal state at the top, down to local communities, and then down to the human individual *delegates* the state's conservation responsibility to that private individual. As Hilgers (2012) states, neoliberalism is often about delegation, while still maintaining state control.

Some such private individuals perhaps cooperate with the neoliberal state's delegation voluntarily (e.g. the capitalist conservation banker), but others become involuntary participants (e.g. a group dispossessed from a protected area). Brockington (2004) argues that the resultant effect is often intensification of pre-existing social, economic, and political inequalities at the community and individual levels. Since enclosure and privatization, as well as commodification, act as such key dynamics in how such neoliberal conservation reinforces or increases these types of inequalities, I turn next to reviewing literature specifically on each of these particular dynamics.

Enclosure and Privatization

Because neoliberalism generally, and market-based conservation more specifically, tends to promote privatization of both natural assets (e.g. water, forests) and the processes involved in managing or conserving them, the natural assets often undergo enclosure (Heynen et al., 2007). That is, such natures previously accessible by the public become controlled or owned by a private entity, often under the designation of 'protected' status. For land, this neoliberal approach to creating 'protected areas' is in some ways reminiscent of how U.S. land was in the past taken and privatized under 19th century federal actions like the *Preemption Act* of 1841, the *Homestead Act* of 1862, the *General Mining Law* of 1872, and the *Desert Land Act* of 1877 (Robbins and Luginbuhl, 2005). In his work on the neoliberal enclosure and privatization of nature, political economist James McCarthy (2005, p. 9) finds that enclosure and privatization, combined with marketization, consistently lead to unequal outcomes for stakeholders, writing that:

> Neoliberalism has meant enclosure and destruction of commons and public goods. From the privatization of state assets and collective property to attempts to create new markets for environmental goods, more of nature is being subsumed by markets. The negative consequences are familiar and grim: increases in socially produced scarcity, growing inequality, and often accelerated

> depletion or degradation of the very resources market mechanisms were supposed to protect.

Such objections to the inequitable distribution of benefits and costs that can result from marketized conservation have apparently done little to slow the continued enclosure, privatization, and commodification of nature. Rather, Nick Heynen and Paul Robbins (2005) find that it has not only increased, but has also expanded to include ever more forms of nature. Bakker (2003) argues that a cause of the resultant inequalities has been the increase in scarcity of the natures enclosed and privatized. Authors such as Mehta et al. (2019) have argued that such scarcities, or at least the narratives sometimes woven about them, are socially and politically promoted as a means of sustaining unequal elite and capitalist power through justifying further resource acquisitions, privatization, and enclosures.

Such literatures, in particular, inform the focus of my research questions. In the context of U.S. market environmentalism, the public perception of scarcity of natural resources or endangerment of nonhuman natures actually enhances elites' opportunity to commodify and financialize them through market-based conservation (protection) initiatives. Consequently, I next review literature on the commodification and valuation of nature in market-based conservation, with consideration of existing discourse that examines whether these facilitate and incentivize inequality of access to those natures.

Commodification and Valuation

In a political economy framework, commodification can be seen as the underlying "logic of capitalism" (Skoll, 2011, p. 67). Commodification has been defined as the transformation of goods, services, information, nature, or even people into objects of exchange, frequently in terms

of economic value (Appadurai, 2012; 1988). Prudham (2009) views the commodification process as *fully* economic, wherein something without an established economic value is assigned one, and that economic value replaces or supersedes other social values. In this more economic perspective, the commodification process alters relationships that previously did not involve commerce into relationships that essentially become commercial. Neil Smith (1984) argued for emphasizing and expanding the role of 'value' in conceptualizing commodification, with Okoli (2014, p. 78) more recently justifying such expansion because material value "takes on the form and substance of a commodity through the transubstantiation of a use value into an exchange value".

As applied within broader literature on market-based environmental conservation models, various forms and processes of commodification of nature have been described. These include everything from bioprospecting, wherein fees are paid by pharmaceutical companies for rights to collect plants and animals (Alves and Albuquerque, 2013; Castree, 2003a; 2003b); to debt-for-nature swaps, wherein debt is forgiven or restructured in return for local funds invested in environmental protection (Smith, 2007); to watershed protection, wherein downstream water users pay upstream landowners to protect forests (Diamond, 2008); to carbon sequestration, wherein companies pay for reforestation or forest protection to reduce CO_2 emissions (Osborne, 2015); to ecotourism and park entrance fees, wherein tourists pay to enjoy conserved wilderness landscapes (Cousins et al., 2009); to fair trade green labeling, wherein higher prices are charged for products produced sustainably (Guthman, 2007).

Focusing in on conservation banking, Okoli's (2014) emphasis on the role of 'value' in commodification becomes particularly relevant; conservation bank credits represent the commodified nonhuman lives involved as having tradeable 'value'. However, there are multiple ways to think about what that value represents. Drawing on the politics of value, I

note that Appadurai (2012) describes 'value' as representing something which is difficult to acquire, and he argues that what can make a commodity political and valuable are the challenging socio-politics involved in acquiring or accessing it. For example, in species-focused conservation banking, an endangered species could be a political and valuable commodity due to its rarity and the complex politics leading to its endangered-listed status.

Amongst literature on market-based conservation models involving the banking of nature, it is popular to discuss the commodification of nature in terms of bank credits for which the exchange value is based upon the ecosystem services[9] provided by those natures being commodified (McAfee, 2012a; 2012b). However, incorporation of ecosystem services as a basis for assigning a valuation to the commodities involved in such banking is neither universal nor standardized, something that appears not always to be clear or well understood. Some such lack of clarity may be due to the variety of terminologies, for example so that the differences between 'conservation banking' and 'mitigation banking'[10] may not be recognized, as environmental economist Valerie Boisvert (2015, p. 134) comments:

> This conflation between different policy instruments and institutional arrangements is misleading. It is indisputable that conservation banking has been inspired by mitigation banking, yet it would be delusive to consider them as identical. They fall within the scope of different legislative instruments and policy frameworks, their objectives are materially different, the agencies in charge of the implementation of the policy are not the same and they have different intervention cultures and representations of the environment.

In discussing conservation banking specifically, Boisvert (2015, p. 135) further highlights its variability:

[9] Ecosystem services are the outputs, conditions, or processes of nature systems that directly or indirectly benefit humans or enhance social welfare (Johnston and Russell, 2011).
[10] Mitigation banking, which is *not* the primary topic of my thesis, frequently does commodify nature in terms of ecosystem services.

> Conservation banking systems are very diverse, and even within a country, the principles laid down in regulations are actualized through varied institutional arrangements.

For example, in the U.S., conservation banks may be focused on commodities representing ecosystem services, as in Florida (Chiavacci and Pindilli, 2019), or individual species, as in California. Bank credit prices may be prescribed by a governing federal agency, such as for Midwest agriculture land (USDA, 2018), or left mostly up to the bank owners to set with some guidance from the USFWS, as in West and East coast states (Department of the Interior, 2013). The lead oversight governance agency might be federal, such as the U.S. Fish and Wildlife Service in Northeastern states, the U.S. Department of Agriculture in Midwestern states (Department of the Interior, 2013), or the U.S. Army Corps of Engineers in Southeastern states, or a state wildlife agency such the California Department of Fish and Wildlife in California.

Having noted this caution about variability of application, ecosystem services are nevertheless an important component of this review. The concept of ecosystem services came about during the development of U.S. market-based conservation, when some members of the environmental sector advocated economic valuation of ecosystem services as a strategy for communicating the benefits of biodiversity in a language that might resonate with politicians, economists, and the public (Balmford et al., 2002; Barbier et al., 2009; Daily and Ellison, 2012; Freeman, 2003; Heal et al., 2005; Pascual et al., 2010). Ecosystem services are consequently defined as the benefits that humanity derives from nature and its ecosystems (Barbier et al., 2009). They are typically categorized as: *provisioning*, for example supporting the production of food; *regulating*, for example the mediation of climate and diseases; *supporting*, such as the production of oxygen; and *cultural*, such as offering recreational opportunities.

Actual translation of ecosystems services into a valuation is part of the aforementioned variability; authors have proposed a variety of category-, situation-, and benefit-specific formulas to calculate economic valuations for ecosystem services (Van Wilgen et al., 1996) and consensus is elusive. For example, Chiavacci and Pindilli (2020) identified 69 different calculation methods in use in the U.S. conservation banking sector that attempt to value distinct ecosystem services facilitated by at least 34 species and 39 habitat types. The complexity of most of these valuation methods requires an advanced level[11] of user skill for each. Liebe et al. (2011) argues that the only commonality consistently shared among existing ecosystem services valuation methods is an underlying basis in humans' perceived, relative 'willingness to pay' for the service a particular ecosystem component provides. Aside from that, Landers and Nihak (2013) and Boyd and Banzhaf (2007) find standardization is lacking. Even the U.S. Environmental Protection Agency (in Ringold et al., 2013, p. 2) states:

> While the notion of ecosystem services has been well-received by many sectors of society since the publication of the 2005 Millennium Ecosystem Assessment, there still exists a glaring need for a united set of concepts that includes a definition of terms from which individual goods and services can be specified, as well as metrics and indicators, and specific, identifiable linkages between ecosystem services and human well-being.

In contrast to the ecosystems services-focused approach, in market-based conservation such as conservation banking based upon a species-centered focus, nature and biodiversity is presumed to have intrinsic value that cannot necessarily be economically quantified according to services they may provide to humans (Butler and Acott, 2007; Rea and Munns, 2017). Consequently, factors that influence species-focused conservation credit valuation include species rarity as indicated by endangered-listed status and, as I explore in Section 2.3 and Chapter Seven, charisma.

[11] Beyond that of a typical land owner unless they are an economics specialist.

However, for both species-focused and ecosystem services-focused market conservation, supply and demand of the land involved is cited in the literature as one of the largest influencers of conservation credit valuation; this contributes to addressing my research questions as to who benefits where, and why. On the supply side, Gómez-Baggethu and Ruiz-Pérez (2011) found that high local land values correlate with a lower supply of available conservation credits due to less land being allocated to conservation banking. That is, where the opportunity cost of land use is greater, there is less production of conservation bank credits; species whose natural habitat falls in locations having high land use values may be inequitably conserved less often, and their corresponding credits may be priced higher. Conversely on the demand side, Fox and Nino-Murcia (2005) found that in locations where there are prolific land development and use activities occurring that have high economic value, such as for housing and commercial developments, public transport projects, and gas and oil extraction, the demand for compensatory conservation credits is increased.

One of the most significant gaps in the literature, which I contribute to filling through this thesis, is the lack of recognition of the variability in types of value derivation and capital accumulation that occurs for U.S. conservation bankers, beyond that from just the sale of conservation credits. This is particularly apparent in California, as the selected case studies in the chapters that follow demonstrate, thereby contributing a deeper understanding of what motivates capitalist land owners to participate in conservation banking. Consequently, I next turn to looking at the existing literature providing relevant theoretical background on diversified value and capital accumulation; in the analysis in Chapters Five and Six, I then show how it applies in practice to each case study.

Diverse, Alternative Forms of Value and Capital

Ultimately, existing literature on market-based conservation involving credits tends to focus on valuation or financialization of nature in terms of the credits themselves, and the buying and selling thereof, especially in thinking about how the capitalist land owner benefits from participation. The statement by Gómez-Baggethu and Ruiz-Pérez (2011, p. 320) that "the economic benefits from conservation banking are realized through the gains made from credit sales" typifies assumptions perpetuated by authors in this space. That is, they may not fully recognize conservation banks as true capitalist enterprises: In entrepreneurship, value diversification is encouraged and the development of multiple streams of revenue and benefits is commonplace among capitalists, to spread risk and expand capital growth opportunities (Erdorf et al., 2013). Applying this to conservation banking, capitalist land owners pursue multiple streams of value from operating a business that offers conservation credits beyond the sale of them. For example, they also gain substantial federal, state, and local tax subsidies from designating their private land as a 'protected area', which can have greater monetary or capital-generating value than the credit sales.

Adam Smith (1776) defined capital as "that part of man's stock which he expects to afford him revenue". For Marx (1894), capital exists within the process of a circuit, and it accumulates out of the process of circulation of itself. Sociologist Pierre Bourdieu (1986) defines capital as the sums of assets put to productive use to derive value. A commonality these views share of capital is that they see it as capable of being renewed and increased circularly through human labor, use value, and exchange value (Beasley-Murray, 2000). Unlike Smith and Marx, however, Bourdieu (1986) categorized capital in recognition of its potential diversity, thus classifying it as either economic, cultural or social capital.[12] In Bourdieu's usage, 'economic

[12] Bourdieu also recognized 'symbolic capital', but this is beyond the useful scope of this chapter.

capital' refers to monetary resources or those having monetary exchange value; but, Bourdieu also recognizes economic capital as a basis for all other forms of capital.

Bourdieu sees 'cultural capital' as learned assets such as skills or qualifications, which enable the possessor to mobilize cultural authority. These include the education, knowledge, credentials, and vocabulary accumulated over time that identify the possessor as an established part of a certain sub-group of society (Sullivan, 2008). Applied to conservation, indigenous conservation knowledge and local knowledge of landscapes and natural capital are two examples of cultural capital that are acquired over time through membership in a specific cultural group (Molnar and Berkes, 2018). In Chapter Five I show how the bank owners transform from conservation beginners to acquiring through experience a certain credibility, or cultural capital, as conservation professionals in the eyes of the state. In Chapter Six's case study, the bank-owning Agua Caliente Tribe draws on—but also develops further among its younger members—their indigenous conservation knowledge as cultural capital.

Bourdieu (1986, p. 248) views 'social capital' as the assets that accrue to someone through building a "durable network of more or less institutionalized relationships of mutual acquaintance and recognition;" these manifest primarily in one's social position and status. Social capital then enables a person to exert influence on social groups. Pretty and Smith (2004) show that the value of such social relations, in the form of trust and reciprocal arrangements, and locally developed rules, norms and sanctions, can reciprocally benefit biodiversity. Schwartz (2006) argues that this can happen because those engaged in conservation may not only benefit from gaining prestige and influence as a result, but can also generate and spread further a shared interest in conservation among others within and beyond that network.

Although part of that prestige and influence is tied to the way conservation itself is often socially viewed as positive, influence can also result from association with, and conservation of, charismatic species and the affect they inspire. However, I identified a gap in the literature, in terms of attention to the roles that species' charisma and affect can play in influencing the distribution of conservation banks' benefits and costs amongst the humans and nonhumans involved. In fact, even the ways species' charisma and affect shape how conservation banking is conducted in-practice receives relatively little attention.

In Chapter Seven, I contribute to filling this gap by analyzing how charisma impacts which species are preferentially conserved in California conservation banks, and how the bank owners employ species' affective labor for the owners' benefit. Consequently, I next turn to looking at the existing literature that provides a theoretical foundation on nonhuman charisma and affective labor from which I draw to help answer my research questions, through practical application of such theory to each case study in Chapter Seven. Nonhuman charisma and affective labor not only influence biodiversity conservation, they are closely tied to the commodification and valuation involved therein.

2.3 The Roles of Nonhuman Charisma and Affective Labor in Influence and Equity

For nonhuman actors in U.S. market-based conservation, the experience of being 'conserved' is variable and complex, with a number of authors observing factors that incentivize the favoring of some species for conservation, and the shunning of others for conservation. For example, Henson et al. (2018), Langpap et al. (2018), and Mir and Dick (2012) argue that the dynamics of the *Endangered Species Act* (ESA) of 1973 combine imperfectly with market-based conservation to render land owners unduly attracted to, or alienated from, conserving certain species based on the legal and economic benefits or costs attached to them.

Charisma and affective labor come to the forefront in existing literature, just as they did in my fieldwork, as being drivers of such unequal favoritism or neglect of nonhuman natures' conservation. In fact, as institutionally important as the *ESA* is in conservation, Colléony et al. (2017) found that people were even more influenced by charisma than by endangered species-listed status in their willingness to financially support a species' conservation. Consequently, literatures examining these two phenomena are vital to helping answer my research question with regard to the determinates of benefit and cost equity among nonhumans in relation to conservation banking.

Nonhuman Charisma

Political Economist Max Weber (1947, p. 328) described charisma as "a certain quality of an individual personality by virtue of which he [sic] is set apart..." Charisma "is the authority of the extraordinary and personal gift of grace" (Weber, 1919: p. 79). Over the decades since Weber's work, there has been a lot of research on charisma, although Antonakis et al. (2015) notes that much of this has been in the arena of organizational sociology and has focused on human leadership. Nevertheless, qualities that authors have more broadly identified as consistently associated with charisma include attractiveness or charm that inspires affect (Turner, 2003), possession of traits with which others identify (Yukl, 1999), expressiveness (Potts, 2010), and influence (Finlay, 2002).

Focusing specifically on nonhuman organisms, charisma still denotes specialness or appeal that triggers affect in the perceiver, but is usually discussed in terms of how its features and qualities are perceived not my other members of its own species, but by humans. Lorimer (2007, 2009) describes such features as comprised partly in the organism's visual appearance

('aesthetic charisma'), but also the organism's material properties and the ease with which the organism is perceived by a human subject ('ecological charisma'), as well as the feelings it prompts on multiple sensory levels when observed or encountered ('*corporeal charisma'*). Additionally, Ducarme et al. (2013) and Lorimer (2016) indicate that nonhuman charisma is subjective and interactional, rather than being standardized or unbiased.

The conservation of nonhuman nature in the U.S. is governed firstly according to the underlying legal premises established by the *Endangered Species Act*. In U.S. conservation banking, this is largely true whether a specific program (e.g. state, regional) is more species- or ecosystem services-focused; consequently, species having 'endangered-listed' status are prioritized in such banking programs. Smith-Hicks and Morrison (2021) find that the factors that determine which species gain endangered-listed species status according to *ESA*-mandated processes demonstrate bias toward frequently hunted game, and charismatic species; this is examined in detail in Chapter Seven. However, the influence of nonhuman charisma in conservation is hardly unique to the U.S. and the *ESA*. Bellon (2019), Colléony et al. (2017), Collins et al. (2011), Lorimer (2007), Skibins et al. (2013), and more have all found on an international scale that charismatic species are often preferentially favored for conservation.

In some conservation contexts and circles, charisma-based favoritism is viewed as pragmatic rather than problematic; other circles hold the reverse view. Sergio et al. (2006) examined a debate between [1] groups who argue that employing charismatic, popularly appealing, top vertebrates as flagship species to facilitate financial support for conservation and raise environmental awareness benefits entire systems within a protected area; versus [2] groups who claim that such focused attention on charismatic species diverts a disproportionate amount of resources to a few popular species, without delivering broader, system-wide biodiversity benefits. After comparing outcomes from the conservation work of both groups, these authors

found that when the charismatic species utilized were key *predators*, their ecosystem did exhibit some broad conservation benefit; however, if the charismatic species were not key predators, then only the charismatic species benefited, not the ecosystem.

This distinction in results is pertinent to the U.S.' Endangered Species List-driven, market-based conservation sector, because banked or otherwise conserved species on privately-owned land are usually *not* top predator species. Brown and Shogren (1998) theorize that this is due to the neoliberalized, and thus privatized, character of the sector, whereby private land owners are less motivated[13] to take on the extra difficulty and expense involved in conserving top predators. There are atypical exceptions (e.g. avian predators such as the Bald Eagle, the 'National Bird of America'), where charisma and extreme popularity adds enough motivation to counterbalance the extra conservation difficulty (Bunn, 2012).

Although such preferential conservation of charismatic species contributes to resultant uneven distribution of costs and benefits, this does not mean that it is the charismatic species or their long-term survival which always benefit; in fact, Courchamp et al. (2018) identified[14] what they believe to be the ten most charismatic species and showed that these are nevertheless currently at particularly high risk of imminent extinction. The effect of charisma on benefit distribution patterns across stakeholders is therefore complex.

Colléony et al. (2017) argue that affect plays an important role in shaping what is perceived as charisma, and authors on affective ecologies have in turn linked nonhuman charisma and affect with influence of human reactions and behavior. For example, it is

[13] Market-based conservation is often promoted to private land owners as a *passive* income business.
[14] According to their method of conducting surveys of the public about which species they perceived as charismatic, as well as theorizing that the species featured on zoo websites and in movies are selected by communication experts based on their appeal to the public.

recognized that charismatic species are sometimes used to market conservation organizations (Barua, 2017; Collard and Dempsey 2013). However, the extent to which nonhuman charisma plays a role has not been explored significantly in the specific context of conservation banking; in instances where it has been acknowledged (e.g. Lofthouse, 2019; Treves and Jones, 2010) this occurs only in passing. I recognized it to be a prominent feature of conservation banking in California, worthy of more attention. To address this gap in the literature, I contribute in Chapter Seven an analysis showing how conservation bankers in California employ—and rely upon—the charisma of certain species to cultivate support from a frequently critical public, and to help legitimize the more controversial forms of diverse value they derive as part of their benefit from involvement in conservation banking.

As authors have noted, a neoliberal state actively enables and facilitates the capital accumulation of its land owners and other capitalists (O'Connor, 2010; Peluso, 2007). A feature that I demonstrate in Chapter Seven is that the neoliberal state plays a role in both recruiting and assisting conservation bankers in making strategic use of charismatic species at multiple stages along a conservation 'pathway'; for example, the state enables preferential designation of charismatic species as 'endangered', and courts private citizens whose land happens to host charismatic species that the state prefers to make a public focus for conservation (e.g. Bald Eagle, Bighorn Sheep).

Affective Labor

Nonhuman charisma can evoke affective responses in humans (Lorimer, 2007). Depending on the context, and an author's interpretation, the concept of 'affect' can have somewhat variable definitions and applications (Massumi, 2002; Thrift 2008; Gregg and Seigworth, 2010). Political ecologist Neera Singh (2018, p. 1) defines affect as "a dynamic

relationality between bodies of various kinds that enhances or diminishes the capacity of a body to [trigger or respond with emotions]; a body in this formulation is defined not by its form or function but in terms of the affects it is capable of." Political theorist Jane Bennett (2010) argues that affect is a necessary element of political ecology activity and conservation, in that nature must usually trigger some affect in humans to inspire their engagement in supporting conservation. Bennett (p. xi) characterizes affect in this sense as being the "moments of sensuous enchantment" with nature, commodities, and other cultural phenomena that play a role in creating the "right mood or landscape of affect" for ethical activity and practices toward nature.

Authors have also applied the concept of 'labor' to nonhumans' roles in different contexts, including: *Metabolic labor*, wherein animals such as cattle, pigs, and chickens convert corn or grasses to meat (Lorimer and Rahmat, 2020) or dairy milk (Porcher and Estebanez, 2019) causing them to grow and thus accumulate surplus value for their human owners (Barua, 2019) and wherein nonhuman life is not only exploited but relied upon to exceed human inputs to production (Beldo, 2017); *physical labor*, such as when draft animals pull carts or ploughs and when pack animals carry humans or goods on their back (Hribal, 2003); *ecological labor*, such as when nonhumans provide ecosystem services like dispersion of seeds or pollen (Lorimer and Rahmat, 2020), or water engineering such as that by beavers, or sequestration of carbon such as that by trees (Bersaglio and Margulies, 2021); and *affective labor*, such as nonhumans' encounter-based participation in religious ceremonies, safaris, or ecotourism (Barua, 2018; Lorimer, 2015).

Acknowledgment of these different ways nonhumans are sometimes spoken about with regard to labor is valuable for substantiating my own application of the term 'labor' to nonhumans, with a focus on affective labor. In existing literature specific to conservation banking, the role of ecosystems services that are in some instances produced through nonhuman

ecological labor[15] is already well-established (Boisvert et al., 2013; Fox and Nino-Murcia, 2005; Hein et al., 2013), although other authors such as sociologist Jocelyne Porcher (2015) argue that only some ecological activity can be considered labor. Affective labor—though also involved in conservation banking—has received less attention in this context. Nevertheless, bodies of work such as those I indicate below do provide some foundation establishing that nonhumans' charismatic traits and behavior are intentionally *employed* to influence human affect responses for other conservation activities. I thus draw on this foundation to contribute empirical evidence in Chapter Seven, showing California conservation bankers not only rely on species' charisma and affective labor, but tailor their conservation decisions to derive the most value from this charisma and labor pairing. The ramifications comprise an important component of recommendations I offer in this thesis' concluding chapter.

'Affective labor' in a broad sense is commonly defined as work carried out to produce or modify emotional experiences in people. In the context of nature conservation, Singh (2013) uses affect theory, and specifically the idea of affective labor, as a way of thinking about the role of 'affective socio-nature encounters' in cultivating environmental subjectivities; Collard et al. (2015) similarly view affective labor as a force that can mobilize conservation based on inspiration of feelings of recognition for the possibilities of individual forms of life or species living together with more mutual awareness.

A number of authors have discussed the affective labor of animals in relation to the roles through which they are engaged as laborers to stimulate the emotions of humans through their liveliness and charisma as exchangeable values (Barua, 2017; Collard and Dempsey 2013). For example, Barua (2019; 2016) has shown that organizations such as the World Wildlife Fund

[15] The term 'ecosystem services' is used widely in these market-based conservation literatures; the term 'ecological labor', less so.

fundraise for biodiversity conservation through the generation of the encounter value of having charismatic lions, elephants, and pandas perform affective labor. In such roles these nonhumans and their charisma are commodified and converted to capital, but their role often also requires interactivity [see Singh, Collard above] or dynamic behavior that is labor, with the benefits to humans sometimes being more clear and certain (e.g. fundraising that supports conservation organization employees' fixed salaries) than that for the nonhumans (e.g. their *possible* conservation).

This all sets up an interesting comparison of the way nonhuman *affective* labor (and by association, charisma) relates to neoliberal, market-based conservation such as conservation banking, regarding how nonhumans' *ecological* labor functions in such neoliberal conservation models. Political ecologist Jessica Dempsey (2016, p. 10) describes a concept of 'enterprising nature' which she says involves:

> the creation of 'enterprising units' of nonhuman life in order to set the conditions wherein differential value of species, nonhuman communities and spaces can be calculated – the creation of what I describe as an ecological-economic tribunal for life.

Dempsey's conceptualization might more obviously be associated with nonhumans' *ecological* labor financialized through calculation of ecosystem services that assigns these levels of relative 'value'; that is, through assigning equivalences, weightings, and rankings to their ecosystem functions to prioritize them according to how they benefit humans. However, Dempsey's concept applies equally to nonhumans' relative charisma and affective labor being financialized, for example in relation to their capacity to trigger human affect that motivates *investment* in their conservation; that is, through informal ranking according to their appeal to or engagement with humans. Both avenues of differential species valuation result in Dempsey's

(2016, p. 10) 'ecological-economic tribunal' for deciding which life will benefit from the enhanced chances for survival. This is helpful to answering my research questions because it is not enough to determine who benefits; it is necessary to understand what factors explain why and how they come to benefit.

2.4 Decolonial Political Ecology, Indigeneity, and Market-based Conservation

Sociologist and humanist Anibal Quijano (2007, p. 174) defined 'decolonialism' as a school of thought which focuses on:

> untangling the production of knowledge from what is a primarily Eurocentric episteme. It critiques the perceived universality of Western knowledge and the superiority of Western culture. Decolonial perspectives see this hegemony as the basis of Western imperialism.

Walter Mignolo (2000; 2009; 2021) notes that the term decolonialism is often conflated with the term 'postcolonialism'. Indeed, the two terms share some similarities. Postcolonialism is the critical academic study of the cultural legacy of colonialism and imperialism, focusing on the human consequences of the control and exploitation of colonized people and their lands (Mishra and Hodge, 2005; Young, 2016). However, postcolonial and decolonial scholar Gurminder K. Bhambra (2014, p. 115) sees one of the clear differences between the two terms to be the time period to which they refer:

> Whereas postcolonialism refers mainly to the nineteenth and twentieth centuries, decoloniality starts with the earlier European incursions upon the lands that came to be known as the Americas from the fifteenth century onwards.

My Chapter Six case study involves issues of both postcolonialism and decolonialism.[16] Because my research questions involved an interest in the distribution of benefits from conservation banking, and a reading of the literature provoked my interest in ways such distribution might be influenced by the legacies of colonialism, this contributed to my selecting a case study having decolonial and postcolonial issues. The Chapter Six case involves a conservation bank owned by an indigenous American tribe. The tribe's participation in conservation banking results from early 21st century pushes for the incorporation of indigenous knowledge and environmental justice into neoliberal government conservation goals. Existing literature specifically focused on Native American tribes' involvement with conservation banking is limited; it is even more so in terms of the ensuing implications for decolonization.

However, literature examining attempts to integrate conservation, enclosure of protected areas, economic development, indigenous groups, and postcolonial contexts in non-U.S. developing countries is more plentiful; even if some contextual specifics are different, such literature offers relevant empirical findings and conceptual material on which to draw. Conservation banks and other types of protected area-based conservation frequently restrict access to the land area and nature in question, resulting in enclosure that can have problematic or inequitable outcomes for some stakeholder groups; dispossession, loss of livelihoods, and other marginalization are examples (Büscher and Arsel, 2012). Political ecology literatures show that in postcolonial contexts where an indigenous stakeholder group is involved, equity issues can have heightened complexity and be difficult to reverse.

For example, Agrawal and Redford (2009), Stevens (2014), and West et al. (2006) found that conservation enclosures, whether facilitated by governments or conservation organizations,

[16] My use of the term 'decolonial' in relation to this case study represents a commitment that was not entered into lightly, as it carries links to indigenous activism; however, the commitment in part respects the voice of the interviewees, who expressly defined elements of their circumstances in decolonial terms.

have had a tendency to increase territorial domination by colonial or modern states while dispossessing indigenous populations from their traditional lands. Adams and Mulligan (2012) and Cronon (1996) argue that such conservation, enclosure, and indigenous stakeholders are incompatible because the concept of enclosure itself derives from colonial thought that views humans as separate from nonhuman nature and not having a directly productive role in their ecosystems. Coulthard (2014) finds that capitalist conservation models for protected land sites involving indigenous stakeholders promote an unsustainable political economy of conservation.

However, in decolonial literature, some alternate viewpoints have emerged that suggest possible contexts wherein a conservation enclosure could be interpreted as having effects that re-solidify the indigenous groups' ownership of and authority over their historic land. For example, political ecologist Clint Carroll (2014) examines the recent increases in North American Indigenous conservation efforts taking the form of tribal national parks. Carroll observes that such constructs enable tribal natural resource managers to gain authority similar to the state in their ability to restrict access to tribal lands as enclosures. However, other authors view even this as also being problematic. For example, Youdelis et al. (2020) posit that such tribal national parks perpetuate a colonial wilderness idealization and preservationism like that which had driven early 20th century national parks as discussed at the beginning of this chapter, while recreating just as much inequality of access via reverse enclosure.

The analysis of the case study in Chapters Six and Seven contributes an interesting alternative scenario to those above, wherein the indigenous American tribe manages the conservation program on their own protected tribal land, but also welcomes the local non-indigenous population onto the land to benefit from engaging with the nonhuman natures conserved there. While avoiding many of the pitfalls observed in the existing literatures above and achieving some decolonizing effects, even this scenario does not fully escape an uneven

distribution of costs and benefits associated with the environmental intervention and change. As I show below, one such cost is in the unbalanced portrayal of the tribe in the publications.

The tribe in question—the Agua Caliente Band of Cahuilla Indians—has received remarkably little research attention despite having achieved a fairly prominent profile in the past two decades due largely to its rags-to-riches transformation; it was on the brink of dying out in the 1990s, but has prospered in the casino and real estate business in the 2000s. Among the published examinations of the tribe, there is a divergence. That with an anthropological focus is pre-millennium; whereas since the 2000s, the small amount of literature attention they receive focuses on their ascension into gambling industry capitalism. In fact, the difference in how authors characterize the tribe culturally, pre- and post-millennium, is striking. Jenkins (1997, p. 14) wrote that "poverty is characteristic of Cahuilla reservation life," and anthropologist and Cahuilla specialist John Lowell Bean (1972, p. 15) stated:

> the Cahuilla never consciously or deliberately assimilated themselves into another system. On the contrary, they have consciously preserved their own model of cultural reality, preferring it to the Anglo-American systems which have been available to them.

Part of the characterization in such older literatures is one of a fading, impoverished, highly tradition-bound tribe that is shrinking in numbers, cultural relevance, and local influence (Harvey, 1967). In contrast, post-millennium authors highlight the newly-wealthy tribe's increasing engagement in legal battles over water rights, courtroom challenges to the state's attempts to tax the tribe's growing casino profits, modernization, and assertions of the tribe's capitalistic ambition and local economic dominance.

For example, Bass (2018), Cole (2015), Lankford (2018), Moore (2017), Newsom (2017), Thompson (2017), Tyra (2020), Zablan (2018), Zetsche (2019) all focus on the fierceness with which the post-casino Agua Caliente Tribe began litigating their claim to control and profit from groundwater reserves near Palm Springs. Akee (2009) and Akee and Jorgenson (2014) find that the tribe and its individual members also established a culture of land lease domination throughout the Palm Springs area during the 2000s that resulted in most non-indigenous residents becoming long-term land tenants of the Agua Caliente Tribe as the regions' primary landlord. Akee even suggests that the tribe has colonized its former colonizers.

The fact that I found the Agua Caliente Tribe I met in my 2018 fieldwork to actually be somewhere in between the above pre- and post-millennium characterizations is a fitting end point to my review of the literature. One of the most important learnings I take away from the experience of undertaking this thesis, is that the literature provides a foundation on which to start, and perhaps captures a moment in time, but the fieldwork experience reveals the ever-evolving ecologies, politics, and stakeholders to be more complex and nuanced 'on the ground' than might have been captured on existing pages. I came to appreciate the never-ending unfoldment of literature and discourse, and why there will always be room for new contributions.

Conclusion

Through review of previous empirical work described in relevant political ecology literature, I have highlighted key concepts and appropriate literatures related to them which help answer my research questions. I have also identified gaps in the literature, and have briefly indicated along the way the contributions my thesis will make to fill them. Below, I highlight and summarize five of particular significance, in that they add new thought that challenges existing assumptions.

The first is an empirical gap. Although a number of literatures have been devoted to market-based conservation, and some specifically to conservation banking, few have focused specifically on conservation banking in California. Since the majority of all conservation banks in the United States are located in California, and since California's approach to conservation banking is influential and distinct both in terms of ecologies as well as the political economy, this gap presents a robust opportunity for meaningful contribution. Part of this involves shedding light on how California's model evolved into its unique form, and how its governance operates within the neoliberal capitalist framework. But, it also includes examining what can be learned from how the human and nonhuman stakeholders experience unequal benefits and costs, such that recommendations may be considered regarding how it might be improved.

Second, there has been a need for a more realistic understanding of the relative role the 'market' plays in conservation banking, which I—in line with Dempsey (2016)--argue has been overstated. I show that not only does the 'market' have a somewhat minor role in the functioning of conservation banking in California, but it also offers little in the way of self-regulating characteristics.

Third, I demonstrate there is a need for more holistic consideration in the literature of the *diversity* in forms of value that is derived by market-based conservation entrepreneurs. Examining how conservation bankers in California diversify their capital accumulation, beyond merely from credit sales, enables my thesis to contribute an analysis of how conservation banking capitalists tap multiple avenues to derive diverse economic, cultural, and social capital.

Fourth there are few existing literatures focused on the intersection of decolonial political ecology, market-based conservation, and indigenous American tribes. Although existing

work involving conservation and indigenous groups in other previously colonized countries provide a starting point for the analysis of shared issues such as indigenous conservation knowledge and enclosure of protected land, my analysis of the unique case study in Chapters Six and Seven identifies several novel twists on these more familiar narratives. These include inversion of the power and economic dynamics between indigenous and colonizing groups, and a facilitation of decolonization outcomes facilitated by neoliberal conservation and successful economic development.

Lastly, although excellent discourse on the topics of nonhuman charisma and affective labor exists in the literature, these have not yet been examined as they relate specifically to conservation banking—even though their application in this context is not only relevant but important. I contribute an investigation into how species' charisma influences which are prioritized in the activities of California conservation banks, and how bank owners employ species' affective labor to both enhance and safeguard the benefits they derive. I show that these have significant implications for how we think about biodiversity conservation approaches.

CHAPTER THREE: METHODOLOGY AND METHODS

Introduction

In this chapter, I describe the research design I employed, the factors I considered to select my case studies, the methods I used to collect various data, and the approach I took to analyzing that data and writing up the results of the research. The methodology and methods utilized were planned well in advance to an extent sufficient for clarifying the aims and enabling logistical preparations prior to actually going to California to begin the fieldwork, but the methods were also approached with a sense of flexibility to allow for adaptation during the fieldwork. The methods continued to unfold and be 'tweaked' somewhat according to emerging considerations, unexpected opportunities, and ongoing reflection as the fieldwork progressed. For example, I gained valuable additional interviewees through a snowballing effect extending from the initial interviewees, and also discovered additional locations and archived data sources to review as a result of earlier data collection.

With my theoretical framework being grounded in political ecology, it was necessary to engage methods that would pull out what was 'political' about conservation banking in California. This required methods that are sensitive to relational differences in power, and to the distribution of benefits among the relevant social groups (Paulson et la, 2003). It also required me to seek insight into how those benefits and costs are felt and experienced day-to-day by the research participants. Consequently, while the interviews, the review of secondary sources and archived materials, and even photography were valuable data collection methods, I needed to also live and immerse myself temporarily in the case study stakeholders' communities in order to experience and observe the dynamics amongst stakeholder groups. Observing research participants' everyday interactions, both human-to-human and nonhuman-to-human, went

almost as far toward helping to answer my research questions as did any interviews or other methods.

My approach to investigating how various humans and nonhumans are inequitably impacted by conservation banking in California resonates with recent work in political ecology, particularly with the methods and concepts connected with qualitative research that has studied neoliberal conservation involving protected areas or endangered species (e.g. Apostolopoulou et al., 2021; Barua, 2014; Butt, 2014; Holmes, 2014; Rainer, 2013; Rikoon, 2006; Sen and Pattanaik, 2015). Influences from exemplary studies such as these, whose methodologies I have drawn from, are reflected in my description in this chapter of how I carried out my research. The chapter is organized into three sections. First, I outline the methodological orientations through which I contextualized and produced this research, and explain how the two case studies were selected. Second, I detail the methods I employed to collect the data, and the types of data collected. In the third and final section, I describe how I analyzed the data and wrote up the results, and I discuss the roles of positionality and reflexivity in undertaking each stage of this research.

3.1 Methodological Orientations

In approaching this thesis through a political ecology framework, I do so mindful of Escobar's (2006) assertion that inequity in the distribution of costs and benefits among stakeholders of environmental interventions or change can take three inter-related forms: economic, ecological, and socio-cultural. Consequently, the lens through which I have viewed conducting this research has been holistic, rather than focusing, for example, only on the ecological. In fact, a major theme of political ecology is making sense of the multifaceted relations between nature and society through analyzing the issues of access and control over

resources (Neumann, 2005; Robbins, 2012). Its emphasis on recognizing this as a *range* of facets has thus played an important role in helping me to identify under-examined aspects of conservation banking that translate to opportunities for me to make a significant contribution to the literature. At the same time, it also emphasized for me the importance of planning my methodology and methods accordingly so that I would gain enough of the right data to indeed span the economic, ecological, and socio-cultural.

The Choice of California as the Research Location

Within the U.S. conservation banking landscape and distribution of the sector, California has the largest concentration of conservation banks among any U.S. state or region [see map in Figure 1 below]. Consequently, I was able to visit a greater number of conservation banks within the fieldwork time period than would have been possible if I had chosen an east coast region, for example, requiring travel across multiple states in order to see more than one or two conservation banks.

The large number of conservation banks in California also indicates a well-established, mature sector that is accompanied by a robust and fieldwork-accessible governance agency structure. This increased the ability of my research to identify patterns and best practices that would be representative of the sector as whole rather than being anecdotal based on only a few research participants. Lastly, California displays an interesting juxtaposition of environmental progressiveness—being an early adopter of environmental impact laws—with a tradition of more classic species-focused conservation that emphasizes individual, popular or hunting-favored species more than ecosystems.

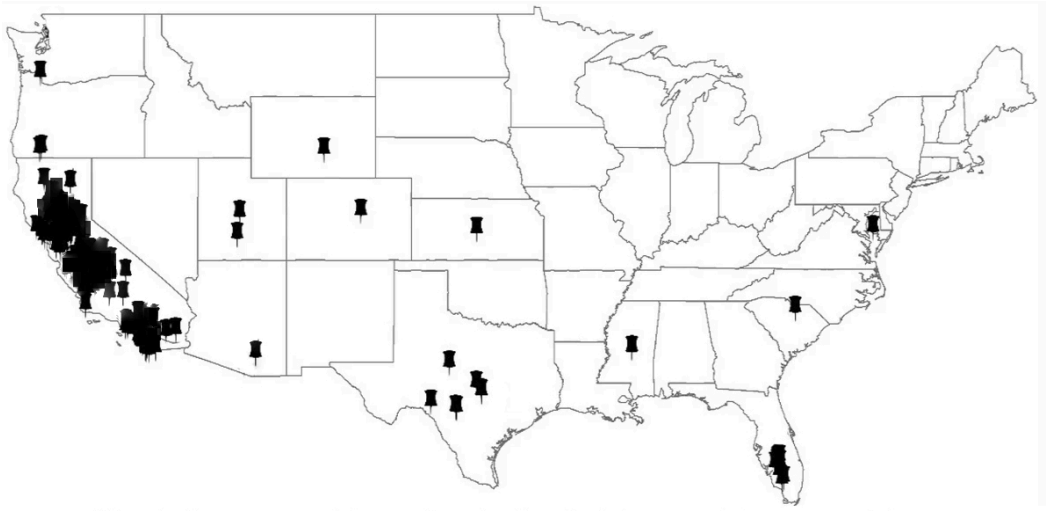


Figure 1. The number of conservation banks by state: California (108); Florida (8); Texas (5); Oregon (3); Utah (2); Alabama (1); Arizona (1); Maryland (1); Washington (1); Virginia (1). Source of data: Regulatory in Lieu Fee and Bank Information Tracking System (RIBITS); U.S. Fish and Wildlife Service, 2018.

Case Study Approach

A case study approach and orientation to undertaking this research was chosen to facilitate a deeper understanding of the intricacies involved in California's conservation banking sector than is currently available from the existing literature. Crowe et al. (2011) have argued that the case study approach is a valuable research methodology when the goal of making a meaningful contribution to existing discourse necessitates gaining an in-depth appreciation of a complex issue, event or phenomenon within its real-life context. My use of the case study approach focusing on two conservation banks meant accepting the trade-off of not being able to also offer detailed analysis of all the other conservation banks in California that I visited. However, it was the depth and focus enabled by a case study approach that facilitated some of the most poignant findings of this research; for example, a less concentrated approach might have prevented discovery and understanding of how each conservation bank owner derives multiple forms of value and capital from their participation in California's neoliberal conservation

model. I nevertheless do incorporate some coverage of non-case study banks into the discussion in Chapters Four and Seven.

The early phase of my fieldwork involved visiting a total of sixteen conservation banks[17], which were geographically dispersed across the 164,000 square miles (U.S. Census Bureau, 2010) of California. I then followed case study selection guidelines by Gerring (2008), and the two case study banks were chosen only after seeing all sixteen banks. Both case study banks are, in significant ways, representative of the sector as I witnessed it, rather than being anomalies. For example, the other conservation banks share with the two case studies several key thematic traits: their owners employ creative capitalism to maximize their benefit via value diversification; the banks have in their origination history a type of mutually beneficial negotiated exchange with the State of California and the California Department of Fish and Wildlife; and they are spatially large.

However, the two case study conservation bank choices also each capture different dimensions of how the benefits of conservation banking are unevenly distributed. The case in Chapter Five addresses the way enclosure and privatization of water on the conservation bank land makes the bank owners wealthy while causing some other Californians to experience water shortages. The case in Chapter Six focuses on an indigenous group and protected area conservation, but with the somewhat unusual outcome of the indigenous group benefitting the most rather than the least from their involvement. Additionally, whereas a number of conservation banks in California—though individually owned—are managed by a common, public relations-savvy conservation management company that somewhat 'cloaks' dynamics regarding

[17] 16 out of 108 is more comprehensive that it may appear; many of California's banks are managed by a single company which I interviewed at one location.

the banks' stakeholders[18], information about the two case studies was more exposed.

The two cases also exemplify well the 'personality' of the neoliberal state in actively courting and facilitating the establishment of both conservation banks. They dispel images of a neoliberal state as one that avoids involvement in private economic matters. In fact, both cases shed new light on just how much motivation government agencies in the U.S. have demonstrated to engage private capitalists in market-based conservation during historical periods when that has been a stated priority of certain presidential and gubernatorial administrations.

Harrison et al. (2017) state that the origins of case study research can be linked to studies undertaken in anthropology in the early twentieth century involving ethnographic studies of individuals and cultures. Although, I do not claim that my research technically involved 'ethnography' such as might be seen in anthropological research, the involvement of distinct stakeholder cultures was a noteworthy factor in both of my case studies. Consequently, I acknowledge that the appeal of interesting cultural aspects (e.g. an indigenous American tribe, undocumented immigrants) also helped draw me to select those case studies; they offered a lot of relevance to the politics and uneven benefit distribution emphasized by political ecology. With that background, I now turn to a brief introduction of the case studies.

[18] For example, court proceeding documents involving those banks were anonymized or found to have details redacted.

Case 1—The Kern Water Bank Authority Conservation Bank (Chapters 5 and 7)

Established in 1997 and spread across 20,000 acres (8,200 hectares), the Kern Water Bank Authority Conservation Bank (KWBACB) was California's second conservation bank ever and is still one of its largest. The KWBACB's location at the southern end of California's San Joaquin Valley is 120 miles north of Los Angeles, and 290 miles south of San Francisco and the Sacramento-San Joaquin Delta [See Figure 2], in a rural, central region of California dominated by large-scale agribusiness. In fact, the KWBACB is surrounded on three sides by 125,000 acres of agricultural land which is also owned by the majority owners of the KWBACB, upon which they grow produce sold under their *Wonderful Company* brand moniker (Wonderful Company Annual Report, 2018; interview, 2018).

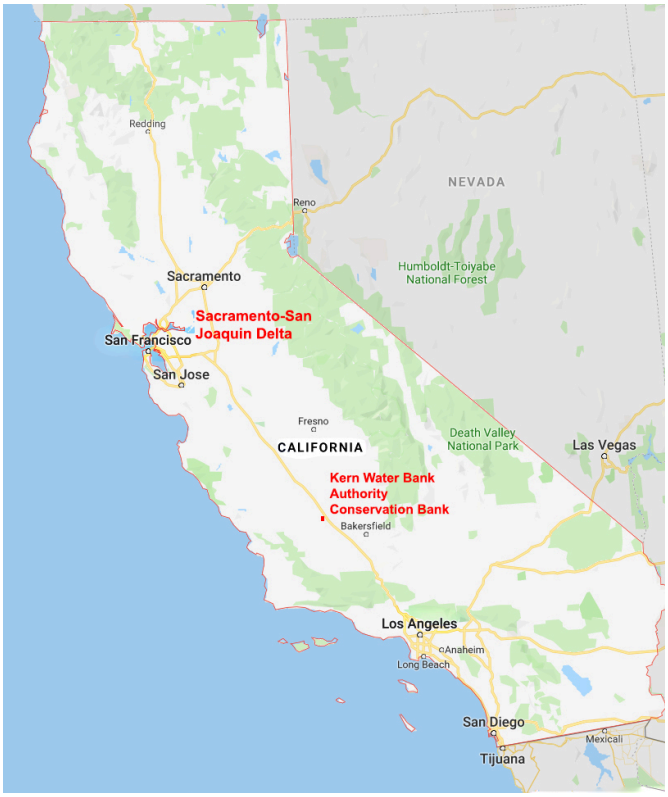


Figure 2. Location of the Kern Water Bank Authority Conservation Bank within California.

California's lower San Joaquin Valley is so prolific in its agricultural production that it grows more of the U.S.' produce than any other state (Department of Food and Agriculture, 2018). The local agriculture practices impact the region's ecosystem and biodiversity via extensive habitat destruction; they therefore have played a large role in what is being offset by the KWBACB.

The KWBACB was originally approved to offer 3,267 (acre) species credits especially representing the Blunt-Nosed Leopard Lizard (*Gambelia sila*), the San Joaquin Kit Fox (*Vulpes macrotis*), the Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*), and San Joaquin Woolly-Threads (*Monolopia congdonii*), all of which are local to the area and autochthonous to the site (KWBACB Habitat Conservation Plan, 1997), as well as being prioritized on California's Endangered Species List (California Department of Fish and Wildlife, 2017). The bank's offering of 3,267 acre-credits has ranked it in the scalar top 1% of California conservation banks in terms of number of credits offered, and it has worked to add more species credits; however, it is still less than might be possible considering the property's 20,000-acre size (California Dept. Fish and Wildlife – Bank Database, 2018). This is due in part to some of the land area being bisected by the large *Interstate 5* Freeway [see Figure 3], and some being occupied by water storage and recharging infrastructure (Interview - KWBACB Bank Manager, 2018).

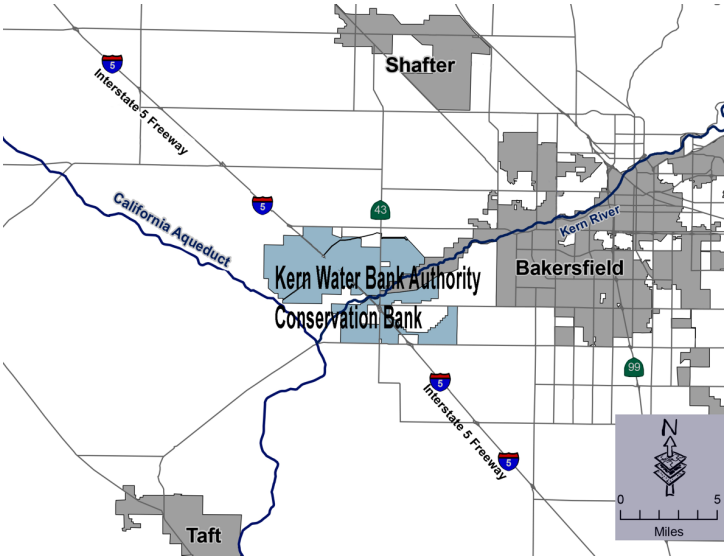


Figure 3. Local orientation and scale of the KWBACB. For comparison, nearby Bakersfield has 384,000 human residents in a similarly-sized spatial area. Note the bank's interceptor position at juncture of Kern River and California Aqueduct.

Currently, the KWBACB is home to 19 endangered fauna species and four endangered flora species which are indicated in Table 1.[19] The KWBACB also conserves species considered 'of concern' and adversely affected in the San Joaquin Delta (USFWS, 2018; Interviews, 2018; Revised THCP, 2017).

Table 1. Endangered-listed fauna and flora species protected at the Kern Water Bank Authority Conservation Bank.

Species Name	U.S. Endangered Species Status
Tipton Kangaroo Rat (Dipodomys nitratoides nitratoides)	State- and Federally-listed Endangered
San Joaquin Kit Fox (Vulpes macrotis mutica)	State- and Federally-listed Endangered
Giant Kangaroo Rat (Dipodomys ingens)	Federally-listed Endangered
Buena Vista Lake Shrew (Sorex ornatus relictus)	Federally-listed Endangered
Aleutian Canada Goose (Branta canadensis leucopareia)	Federally-listed Endangered
American peregrine falcon (Falco peregrinus anatum)	Federally-listed Endangered
California Condor (Gymnogyps californiahus)	State- and Federally-listed Endangered
Least Bell's Vireo (Vireo bellii pusillus)	Federally-listed Endangered
Southwestern Willow Flycatcher (Empidonax traillii extimus)	Federally-listed Endangered
Western Snowy Plover (Charadrius alexandrinus nivosus)	Federally-listed Endangered
Blunt-nosed Leopard Lizard (Gambelia sila)	State- and Federally-listed Endangered
California Red-legged Frog (Rana aurora draytoni)	State-listed Endangered
California Tiger Salamander (Ambystoma californiense)	State-listed Endangered
Giant Garter Snake (Thamnophis gigas)	Federally-listed Endangered
Conservancy Fairy Shrimp (Branchinecta conservatio)	Fedeally-listed Endangered
Longhorn Fairy Shrimp (Branchinecta longiantenna)	Federally-listed Endangered
Valley Elderberry Longhorn Beetle (Desmocerus californicus dimc	Federally-listed Endangered
Vernal Pool Fairy Shrimp (Branchinecta lynchi)	Federally-listed Endangered
Vernal Pool Tadpole Shrimp (Lepidurus packardi)	Federally-listed Endangered
Bakersfield Cactus (Opuntia basilaris var. trieasei)	State- and Federally-listed Endangered
California Jewelflower (Caulanthus californicus)	Federally-listed Endangered
Kern Mallow (Eremalcha kemensis)	Federally-listed Threatened
San Joaquin Wolly-threads (Monolopia congdonii)	State- and Federally-listed Endangered

The KWBACB is approved and classified as a conservation bank as opposed to a wetland mitigation bank.[20] Nevertheless, in recent years, the bank has added wetland habitat areas through making adaptations that take advantage of the property's unique water transport and recharging infrastructure, such as riparian zones created alongside water transport canals and ditches, and surface water features that capitalize on the recharging ponds (Interviews, bank staff, 2018). As these have since become increasingly populated with water fowl species, the bank has been recognised by the California Department of Fish and Wildlife (CDFW) as partially offsetting habitat loss that has occurred in California's Sacramento-San Joaquin Delta due to state water diversion projects (Interviews, Bank staff, 2018; Interviews, CDFW, 2018).

[19] *'State-listed' means on the California Endangered Species List. 'Federally-listed' means on the United States Endangered Species List. 'Endangered' indicates imminent extinction. 'Threatened' indicates likely to move onto the 'endangered' list in the foreseeable future. 'Of concern' indicates significantly declining population, possible move to 'threatened' classification in foreseeable future.

[20] A mitigation bank protects and compensates wetland/aquatic resources. The lead governance agencies are the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency. A conservation bank protects non-wetland threatened and endangered species and/or their habitat. Lead governance agencies are the U.S. Fish and Wildlife Service and a state (e.g. California) Department of Fish and Wildlife.

I observed some aspects of this offsetting during my site visits to both the Sacramento-San Joaquin Delta and the KWBACB; for example, I recognised several bird species at the KWBACB, including the Snowy Egret, the Southwestern Willow Flycatcher, and the Western Snowy Plover [see Figure 4] that would normally be seen in the Sacramento-San Joaquin Delta but would be uncommon to see in the lower San Joaquin Valley (Hall et al., 2020; Neuman et al., 2019; Parsons and Master, 2020).



Figure 4. Photo by Gregory Anderson at Kern Water Bank Authority Conservation Bank, 2018.

Case 2— The Agua Caliente Tribal Conservation Bank (Chapters 6 and 7)

This case study examines the Agua Caliente Tribal Conservation Bank, the result of a negotiated exchange between the federal government and the Agua Caliente Band of Cahuilla Indians whereby the Tribe established a conservation bank and the state facilitated the Tribe entering into the lucrative casino business. Established in 2004, the Agua Caliente Tribal Conservation Bank (ACTCB) is located adjacent to the city of Palm Springs in California's Coachella Valley, 130 miles southeast of Los Angeles [see Figure 5] in Riverside County.

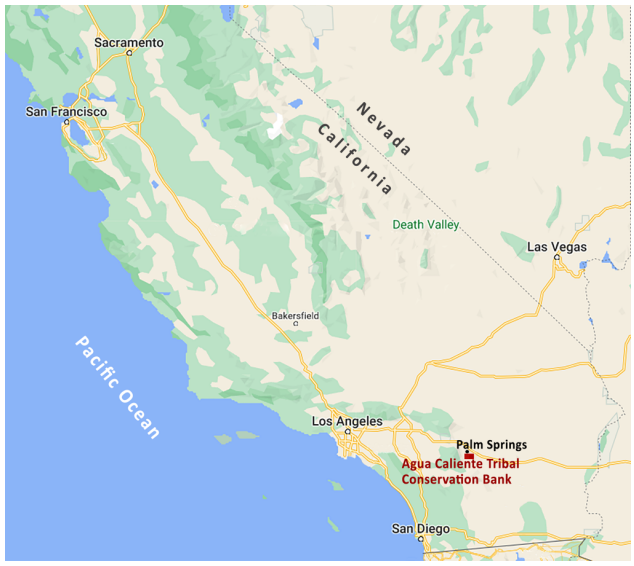


Figure 5. Location of the Agua Caliente Tribal Conservation Bank in Southern California.

Currently spanning portions of 36,500 acres of tribal land, the ACTCB land is inherently rich in habitat that supports a number of species federally listed as 'endangered' or 'threatened', having a wider variety of endangered species than other California conservation banks (California Department of Fish and Wildlife, 2017; Pinceti and Jonas, 2011). Large variations in the elevation and topography of the Coachella Valley, with accompanying differences in temperature, precipitation levels, wind, and other meteorological conditions, help explain the ACTCB's concentration of broad-ranging biological diversity.

Under the terms of the ACTCB's initial *Tribal Habit Conservation Plan* (THCP) that established the bank, the Agua Caliente Tribe originally committed to enhancing two parcels[21] of the conservation bank land in order to increase habitat capacity. This was planned to more than offset the estimated adverse impact to species that was calculated to result from development *and* operation of the Agua Caliente Casino Resort complex. U.S. Fish and Wildlife Service (USFWS) follow-up site visit reports have documented that the Tribe has progressively expanded the amount of species and habitat conserved well beyond its original commitments (ACTCB Annual Report, 2006). Although as noted above the bank land was already rich in autochthonous flora and fauna, annual assessments conducted by a third party have also confirmed further resultant increases in both the diversity of species counts as well as absolute population number counts corresponding to the Tribe's habitat enhancement activity (Helix Environmental Planning Inc., 2008; 2010; 2012).

[21] A parcel equals 640 acres.

Currently, the ACTCB is home to 19 vulnerable fauna species and eight vulnerable flora species. Of these, the federally-listed species conserved by the bank are indicated in Table 2. The ACTCB also conserves species listed on California's *Endangered Species List,* as well as some species considered 'of concern' and historically important to the Agua Caliente Cahuilla itself (USFWS, 2018; Interviews, AC Tribe, 2018; Revised THCP, 2010).

Table 2. Endangered- and Threatened-Listed fauna and flora species protected at the Agua Caliente Tribal Conservation Bank.

SPECIES NAME	U.S. ENDANGERED SPECIES STATUS
Peninsular Bighorn Sheep (*Ovis Canadensis Nelsoni*)	Federally-Listed Endangered
Least Bell's Vireo (*Vireo Bellii Pusillus*)	Federally-Listed Endangered
Southwestern Willow Flycatcher (*Empidonax Traillii Extimus*)	Federally-Listed Endangered
Mountain Yellow-legged Frog (*Rana Muscosa*)	Federally-Listed Endangered
Desert Tortoise (*Xerobates Agassizii*)	Federally-Listed Threatened
Triple-ribbed Milk-vetch (*Astragalus Tricarinatus*)	Federally-Listed Endangered
Coachella Valley Fringe-toed Lizard (*Uma Inornata*)	Federally-Listed Threatened
Flat-tailed Horned Lizard (*Phrynosoma Mcalli*)	Federally-Listed Threatened
Palm Springs Ground Squirrel (*Spermophilus Tereticaudus*)	Federally-Listed Threatened
Coachella Valley Milk-vetch (*Astragalus Lentiginosus Coachellae*)	Federally-Listed Endangered
Burrowing Owl (*Athene Cunicularia*)	Federally-Listed Bird of Concern
Crissal Thrasher (*Toxostoma Crissali*)	Federally-Listed Bird of Concern
Le Conte's Thrasher (*Toxastoma Lecontei*)	Federally-Listed Bird of Concern

Comparison and Contrast of the Cases

While both of these cases deal with key themes of diversified value and commodification of charismatic species, they do so rather differently to reveal that a neoliberal conservation modality like conservation banking significantly promotes or enhances competition for benefits among both humans and nonhumans; the differences between the two cases show the extent to which the neoliberal state influences the relative advantages and disadvantages various groups experience as they engage in that competition.

Table 3. Summary Comparison of the Case Study Conservation Banks

	Kern Water Bank Authority Conservation Bank	Agua Caliente Tribal Conservation Bank
Form of Ownership:	Public-private agency majority-controlled by two private agribusiness moguls (spouses).	Sovereign indigenous American tribe
Number of Credits:	3,267 acre credits	4,100 acre credits
Size:	Spread across 20,000 acres, although portions of this are dedicated to water bank infrastructure and the Interstate 5 Freeway.	Spread across 36,500 acres but these are not all contiguous and large areas are dedicated to other uses.
Types of Habitat:	Grassland, alkali playa, riparian, and valley sink scrub habitats.	Desert, some mountain foothill habitats.
Types of Nonhuman Species:	Rodents, reptiles, large birds, desert and grassland flowering plants.	Large foothill mammals especially Bighorn Sheep, desert rodents, coyotes, reptiles, large birds, desert flowering plants and
Surrounding Human Stakeholders:	Large-scale farmers, low-income Hispanic immigrant agricultural workers, working-class white families.	White upper middle-class land-owners; Hispanic immigrants as cheap laborers.

3.2 Data Collection Methods

I undertook this research using a combination of different qualitative methods, as described by Clifford et al. (2010). Hammarberg et al. (2016, p. 498) have indicated that qualitative methods are suitable when the researcher seeks to answer exploratory "questions about experience, meaning and perspective, most often from the standpoint of the participant. These data are usually not amenable to counting or measuring." The methods I have employed are familiar to research that served as inspiration for my work and to which I refer in my analysis chapters, including Barua (2016; 2017; 2019) Dempsey (2016; 2017) and Lorimer (2006; 2007; 2012).

Although my fieldwork in California was conducted during Spring 2018, the process of collecting data for this research was not restricted only to that period. Before I left for California, I entered into communication with some individuals to gain assistance in accessing database and

archived materials. Similarly, after I returned back to Oxford from California I maintained contact with several other interviewees who had taken a particular interest in the research as related to their own conservation activities, and who made themselves available to discuss follow up clarifications I had during the months that followed. That being said, the great majority of data was collected while I was present in California, and in particular, all interviews except for one were conducted in-person, face-to-face. Table 4 below summarizes the types of data I collected, the methods I utilized to collect them, and the various groups and sources from which I collected the data.

Table 4. Methods Employed

Type of Data	**Description of Data**	**Method of Collecting the Data**	**Who or What the Data Represents**
Interviews	Transcriptions of 61 semi-structured interviews conducted during my fieldwork.	Most interviews were recorded using a sound recording app on my iPhone, and transcribed later. The usual locations of the interviews depended on context. Governance actors were interviewed at their offices within the agencies that employ them. Bank owners were interviewed in their corporate offices. Bank managers and staff were interviewed on the conservation bank sites, and usually during the course of a tour of the bank. Community members were interviewed in some cases at their homes, or at pre-determined sites around the community.	1. Individuals in governance positions at agencies that regulate, manage, or support conservation in California. 2. Conservation bank owners, managers, or administrative staff. 3. Other conservation bank stakeholders and community members
Observation, with the observations entered into a field diary.	Observations jotted down during or after interviews or encounters with other community stakeholders, or during encounters with nonhumans at the conservation banks.	I employed a combination of (primarily) passive and (limited) moderate observation (DeWalt et al., 1998), and documented research subjects' observed actions, expressions, relevant appearance, and self-	Documents relevant emotions observed as a way of understanding research participants' attitudes and lived experiences. Documents observed behavior and circumstances of the nonhuman lives involved.

Type of Data	Description of Data	Method of Collecting the Data described feelings in a fieldwork diary.	Who or What the Data Represents
Archival Materials and Secondary Data	Historical 19th and early 20th century political documents, maps, and newspaper clippings; more recent court records.	Archived documents were digitally scanned or copied where allowed, or photographed with my iPhone.	The materials are used as evidence that informs, supports or augments data gained through interviews, readings, or other secondary sources.
Photography	Photographs of human and nonhuman research subjects, and case study conservation bank landscapes and details. I also used photography to capture some archived materials above.	I used my iPhone for some photos, but made use of a DJI Mavic drone to capture above-ground-level shots that could document geography-ecology issues, and that could get closer to species depicted in Chapter Seven.	The images provide insight visual, more-than-representational aspects of, and life with, conservation banking in California.

Interviews

Interviewing stakeholders who are involved in the governance, management, and day-to-day implementation of conservation banking in California (i.e. which I refer to forthwith as conservation 'elites')[22] was essential to addressing my research question regarding how it functions. Investigating how this sector's benefits and costs are distributed meant interviewing many of these same stakeholders, but also other groups such as those who actually own the conservation banks,[23] or those who reside or work adjacent to the banks (i.e. referred to forthwith as 'lay persons'). For both elite and lay person groups, my solution was semi-structured interviews, of which I conducted 61 in total. However, I would note that there was less formality to interviews with the lay person interviewees, who had a greater tendency to digress into unexpected personal tangents, but who I came to recognize may have felt more freedom to digress because their responses did not need to conform with expectations of an institutional employer such as a government agency. I drew on guidance regarding interviewing 'elites' from

[22] I use this term to indicate conservation-specific expertise rather than status, as per Liddig (2009).
[23] The bank owners tended not to directly manage or implement; professional staff performed these activities.

Bogner et al. (2009) and Littig (2009); I took care not to over-invest in the idea of distinguishing between elites and lay persons, as Littig (2009) cautions that the determination of who qualifies as 'elite' is seldom black or white and relies on individual researcher judgement more than widely agreed-upon criteria.

An interview strategy I sparingly employed to assist in generating and maintaining conversation flow with lay person interviewees, and some less verbal or less interview-savvy elite interviewees (e.g. conservation bank managers) was what Ecclesa and Arsal (2017) refer to as the 'think aloud' technique. That is, I interviewed such individuals while they were actively doing workday activity, whether that involved guiding me (and others) on a tour of the conservation bank, or setting up ground cover mechanisms for Tipton Kangaroo Rats [see Chapter Seven]—as examples—while they spoke about what they were doing, why they were doing it, and their thought process behind it. Another interview technique I used was to introduce photographs I had taken during the earlier days of my fieldwork (Hurworth, 2004; Lapenta, 2011; Vandebroek and Van Damme, 2007) as conversation starters.

Governance interviewees ['elites'] provided direct-source information on how conservation banking is governed and regulated in California. Specifically, I interviewed the head of the Habitat Conservation Planning Branch within the California Department of Fish and Wildlife (twice), two Regional Coordinators at the California Department of Fish and Wildlife, the Executive Director of the California Fish and Game Division, the Deputy Chief of the California Governor's Tribal Advisor Office, the Undersecretary for Environmental Protection at the California Environmental Protection Agency, one historian at the Department of Water Resources, three senior field staff members of the California Department of Fish and Wildlife, and one Regional Case Manager at the Bureau of Indian Affairs (via telephone).

Bank management and implementation interviewees [also 'elites'] provided explanations of how conservation banking is most commonly implemented in California, and described currently accepted best practices. I interviewed seven staff of non-case study conservation banks, the Bank Manager of the Kern Water Bank Authority Conservation Bank, the third-party (non-indigenous) Manager of the Agua Caliente Tribal Conservation Bank, and two Tribal Rangers of the Agua Caliente Tribal Conservation Bank.

Lay person interviewees provided data regarding stakeholder impacts, benefits, and costs related to the case study banks' direct and indirect activities and circumstances. Although some interviewees in this group were professionally involved with conservation institutions, their primary expertise and responsibility was in organizational management, law, or scholarship [hence, lay persons]. I interviewed one owner of the Kern Water Bank Authority Conservation Bank and the Wonderful Company; a Professor of Historical Geography at the University of California – Berkeley; one attorney at the Center for Biological Diversity; two Sacramento-San Joaquin Delta conservation organizations' leadership staff; the CEO of California Water Impact Network; one Corporate Social Responsibility staff at ExxonMobil; members of the Agua Caliente Tribe—these being the Vice Chairman of the Tribal Council (twice), and a Tribe member employed at the Agua Caliente Casino; two Kern County competing farmers; six Lost Hills residents; 12 members of the non-indigenous population in Palm Springs, including one City Council member, the Deputy City Clerk, the Assistant City Planner, three city business owners, three residential home owners; and two members of the Tuolumne MeWuk Indian Tribe.

Across all of the interviewees, there was mix of gender, ethnicities, and economic classes represented. With regard to gender balance, it was somewhat possible to seek out a balanced mix across almost all groups, except for the all-male Agua Caliente Tribal Council, and executive conservation governance agency staff. However, economic and ethnic distribution was more

limited by group. For example, almost all conservation governance interviewees were middle-class and either white or Hispanic; bank owners were generally all wealthy, and only the Agua Caliente Tribe were non-white; virtually all conservation bank implementation (non-management or non-biological science) staff were non-white.

In all interviews, I tried to ensure that research participants were given scope to shape the path the interview took. I always worked from a list of questions and topics that served as a guiding roadmap in order to ensure that I gained the data that would help me answer my research questions, but nevertheless maintained a sense of openness in the interviews to create opportunities for the participants to communicate and contribute in ways that were comfortable. This approach allowed participants to share their interpretation of their experiences in relation to conservation banking generally, or to the case study conservation banks specifically, in ways that did not preclude them from offering me insights, suggestions, or introductions to data sources that I might not have foreseen.

Ethics, Consent, and Anonymization

Prior to conducting interviews with each research participant, I provided them with a summary document that explained the aims and scope of my research. I also verbally went over the summary to address any questions, and to convey in a more personalized way my interest in the insight their participation would contribute. I obtained written consent from each interviewee, including consent for me to record their voice responses to interview questions, as well for me to take written notes about their responses and about any observations I made. Two participants decided during their interviews that they preferred not to be voice-recorded after all, instead preferring that I just take written notes, so I complied with their wishes. In some instances, I made additional written notes of my observations after the interview interactions had

concluded; I found that I needed time to make sufficiently detailed notes regarding the observations. In these instances, I subsequently shared the observations I had written down with the participants, to ensure they had a chance to consent to the additional notes. I explained to each participant that their responses to my questions would be treated anonymously, consistent with the University of Oxford's research ethics guidelines (CUREC). I clarified that this meant I would not disclose the personal names of any interviewees, and any quotations would be attributed to a pseudonym.

Specific to the indigenous context of the case study in Chapter Six, I opted to obtain informed consent both from the indigenous individuals, as well as obtaining overarching consent from the Tribal Council based on their holding the position of community respect and authority to agree on behalf of the Agua Caliente Tribe as an entity (Davison and Moffet, 2006). I also confirmed that there were no issues limiting understanding based on language, although the current Tribe members cite English as a first language for them. Additionally, I ensured clarity that although the Tribe would not have ownership rights to the research *findings* as an intellectual property, it was recognized that the participants as individuals as well as the Tribe as a community share ownership of the data collected from and through them, as per power-sharing recommendations cited by Smith (2013). Furthermore, I have maintained an ongoing transparency and openness with respect to any of the indigenous participants wishes to review any data collected through my interactions with them; this follows the accountability guidance of Snow et al. (2006).

Living in the Case Study Communities to Undertake Observations

As part of my fieldwork, it was important for me to spend time living in and immersing myself into the communities of the two case study conservation banks. For the Kern Water Bank

Authority Conservation Bank case, the community was Lost Hills, California (population 2,412) and for the Agua Caliente Tribal Conservation Bank case, the community was Palm Springs, California (population 47,000). Residing for three weeks in Lost Hills, and subsequently for five weeks in Palm Springs, enabled me to interact daily with the banks' local stakeholders, observe what their day-to-day lives were like, and build familiarity and trust with them. Living directly in the communities also impacted my positionality, in that it led me to gain greater awareness about the significant everyday challenges faced by Lost Hills residents. Hope (2009, p. 169) writes that "fieldwork can give us direct experiences that challenge our preconceptions. The reality of others can 'call us to attention' in ways that make them matter to us." This certainly proved true in my research; my perception of the undocumented worker and indigenous American groups, for example, was profoundly sensitized by the experience.

Lost Hills

Lost Hills is a small, isolated town alongside the busy *Interstate 5* freeway that most passersby may perceive as only a place to re-fuel their vehicle on their route to somewhere else more pleasant. The town is eerily well-named; it has a forlorn energy that suggests few people with better options would choose to be there. However, taking up short-term residence in the town engaged my mind, body and senses in experiencing the feeling of living, eating, and sleeping in this marginalized community.



Figure 6. Interstate 5 freeway exit to Lost Hills, California. Photo: Gregory Anderson, 2018.

Pink (2015, p. 5) argues that "experiential engagement in the production of knowledge that is at once theoretical (in that it makes a contribution to scholarship and discourse) and substantive (in that it contributes to a body of academic knowledge about a particular theme)" can also facilitate contributions that shape a social issue or social knowledge. Understanding as best I could the marginalization of the undocumented immigrants who comprise most of Lost Hills and who, as examined in Chapter Five, are the stakeholders who benefit among the least from the Kern Water Bank Authority Conservation Bank, was important to my aspiration of contributing socially significant research. It was also important to more fully answering my research questions. I incorporate more details of the experience into Chapter Five, where they are woven more usefully into findings.

Palm Springs

Palm Springs is a medium-sized winter resort town positioned in a somewhat isolated area of the large and sparsely-inhabited Sonoran Desert (which spans both the U.S. and Mexico). Palm Springs' population fluctuates significantly according to season; it is a mix of golf vacationers, winter weekend residents, full-time winter resident retirees, working class service sector laborers, property developers, and Agua Caliente Cahuilla Indian Tribe members. The interactional dynamics between these various groups could not have been learned about through interviews only; day-to-day observations were vital.

Schensul et al. (1999) argue that observations assist in the interpretation of interviews, and vice-versa; Driscoll (2011) has noted that observation also allows for flexibility and creativity to pick up on non-verbal subtleties. In Palm Springs, I also had plenty of opportunity to observe how the various human groups interact with nonhumans of the conservation bank, in part because of the unique way much of the conservation bank land is interspersed with areas of Palm Springs, as well as due to some parts of the conservation bank not having clear border-barriers that would prevent nonhumans from (fearlessly) entering city spaces [see Figure 7]. Consequently, at times I had the feeling that I was not so much living adjacent to the conservation bank, as living almost in it.



Figure 7. A Coyote encounter of my own while walking out to my parked car at my accommodation in Palm Springs. Photo: Gregory Anderson, 2018.

Research Participant Observation

The observations I collected regarding research participants were informal; I took field diary notes in which I sought to document the experiences, cultural perspectives, and feelings (if shared) of research participants that would give me a sense of relevant information about their motivations and priorities. With the permission of participants, I took notes describing the physical characteristics of the locations I saw, such as conservation bank conditions, the housing conditions of participants in the two case study locations, the government office culture of conservation governance elite interviewees, and manners of dress. In particular, observations I recorded emphasized the participants in the case study geographies: the stakeholder communities of Lost Hills, California, where most residents are employed by the owners of the Kern Water Bank Authority Conservation Bank, and Palm Springs, California, where local

stakeholders of the Agua Caliente Tribal Conservation Bank live. I also took notes regarding interactions I observed between the conservation banks' nonhuman and human actors.

Some of the observations above are shared overtly in Chapters Five, Six, and Seven, while more acted as the support behind my analyses for these chapters. I was aware that all of these types of observations were unavoidably being filtered somewhat through my own subjective perceptions and frames of reference, so I also made notes reflecting on my own thoughts and feelings about what I was observing. I believe this helped me to identify and then more readily recognize the filters so as to improve my ability to distinguish the objective from the subjective in my observations, through attention and practice. Though that improvement was admittedly modest, it showed me—as did my improvement in interviewing skills—that a researcher can improve with experience.

Photography

Williams et al. (2017) and Hall (2009) have argued that photography is an underutilized but valuable component of fieldwork data collection in geographical research. With conservation banking, I found visual data not just valuable, but critical, as it can for example convey what a bank and its habitats looks like, how the conserved species are situated on the bank landscape, and how those species are treated. I made significant use of photography, in part to collect the visual evidence for the analysis that would substantiate or augment my thesis narrative, and in part as a note-taking tool to enable me to remember more detail than would have been feasible through note-writing or dictation. Photography also had import as a method in how it enabled me to later go back and, through closer inspection, spot details or clues that had gone by too quickly at the original time.

Photography and visual data was especially important in relation to the nonhumans in my case studies. For example, in Chapter Seven I use photos I took of the Agua Caliente Tribal Conservation Bank's Desert Bighorn Sheep; the photos communicate the visual role of the Sheep's aesthetic charisma in triggering human affect for conservation support purposes. Researchers like Whitley et al. (2021) have found that photography is increasingly used by conservationists to depict animals that can evoke affect and empathy to generate support for their conservation activities. Consequently, it was important that I capture and show through my own fieldwork photos that the charisma of conservation-banked species is visual and indeed photographable. It was also important for me to show visually how artistic imagery such as painted statues [see Chapter Seven] of the charismatic Desert Bighorn Sheep has been used by the Agua Caliente Tribe to legitimize their role as conservation and culture custodians to Palm Springs, as symbolized by their conservation of this sheep species which was pivotal to the Tribe's exchange with federal agencies.

Photography was also important in helping focus more directly on the different human participant groups involved, capturing their cultural and circumstantial details as part of my task of looking at who benefits more and less from conservation banking in California. At the same time, I approached the employment of photography as a visual method with caution and mindfulness for compliance with ethics requirements and considerations, and recognition of my own positionality. Rose (2016) has discussed that photography can raise concerns of power dynamics between the researcher and the researched, and notes that visual media can carry risks of eurocentrism and other 'viewpoint' matters. So, for example, in Chapter Six I include photos of several members of the Agua Caliente Cahuilla Tribe which were not only taken with their full permission and encouragement, but were also subsequently shared with them for usage approval.

I used my iPhone camera for most photographs, but I also used a DJ1 Mavic drone to enable a couple of sky-level views from above to capture comprehensive, map-like visual data. In both forms, the photography helps enhance the clarity of what is difficult to adequately describe textually. For the most part, I preferred to work with images I had taken myself. In a couple instances, where credited, I worked with an existing image; for example, in Chapter Five, I use a screenshot of the Instagram page of the Wonderful Company to show how its owners use images to present a 'green' narrative about their agribusiness company's relation to their conservation bank.

I acknowledge some regret over not incorporating video, which would have been possible both with my iPhone, and the drone; my concern in 2018 was in how it would be presented and submitted given that DPhil thesis was until 2020 typically submitted in printed rather electronic form. Lorimer (2010) has discussed the potential value of 'moving image' methodologies such as video for witnessing and communicating human-nonhuman interactions and affect to the viewer, advocating for use by more-than-human geographers. I attempted to capture such interactive encounters and affect with my still photography, but with some limitations owing to that medium. For example, in Chapter Seven I include a still photograph taken at the Agua Caliente Tribal Conservation Bank where Palm Springs locals were invited to witness in a participatory way the arrival of translocated Desert Bighorn Sheep. Ironically, the primary participation of attendees that the photo is able to capture is them also photographing the event; had I used video instead, what would also have been captured was their highly invested, almost parental vocal encouragement of the hesitant sheep to step out of the transport vehicles. Also captured would have been the sheep's response to, and engagement with, attendees' vocalizations.

Archival Materials

Legal, government, and historical documents were the type of archived data materials I drew upon. As previously indicated, interviewees played a role in helping me collect these data; in some instances they helped me locate them directly (e.g. Palm Springs City Clerk) but more often they made me aware of their existence and from that I conducted searches using logical tools (e.g. California Law Library case search databases). These data were coded not unlike my interview transcripts, but were also reviewed, evaluated, or interpreted in order to draw out the empirical meaning and knowledge largely specific to that one document (Bowen, 2009; Corbin and Strauss, 2008).[24]

Archived and digitized materials provided supplemental information, such as that which no interviewees knew or could remember, or that which historical documents or images illustrate well. I also sought out archival materials when I required historical evidence that would help explain why a current or recent circumstance came to be the way it is. Because I was focused on a case study involving an ancient indigenous American tribe in Chapters Six and Seven, I was concerned with addressing historical issues with the best possible accuracy, ethics, and sensitivity to nuance. Louis (2007, p. 130) argues that archived data materials can provide a voice to and for the past "which is respectful and ethically sound from an Indigenous perspective." However, mindfulness was also required regarding the fact that indigenous American history is known to sometimes be poorly archived due to past erasure of indigenous records from official records (Christen, 2011; Montenegro, 2019). I preferred to treat archival evidence as valuable, but best used when other corroboratory evidence also existed.

[24] Although this would then support broader thematic aspects of my research findings by corresponding with other forms of data such as from interviews.

In Chapter Four, I draw upon an archived California Governor's "State of the State" speech from 1851 that helps explain why the earliest state-level conservation commitments in California were made. Also in Chapter Four, I draw upon archived telegrams between President Theodore Roosevelt and California Governor George Pardee from 1903 to evidence an early pattern of patriarchal federal-to-state cross-collaboration on the institutionalization of conservation.

In Chapter Five, I drew upon archived records of land parcel claims filed under the 1862 Homestead Act, and 1908 County Assessor records of land ownership by farmers, as part of tracing the land use history of the Kern Water Bank Authority Conservation Bank land. Also in Chapter Five, I draw upon 2006 court filings archived by the Sacramento County Clerk, which detail lawsuits against the Kern Water Bank Authority and show that the entity has been sued repeatedly as part of efforts to reverse the enclosure and transfer of the water bank from the state to privatized ownership.

In Chapter Six, I draw upon court documents from the Sacramento State Courthouse Clerk showing how the Agua Caliente Tribe sued the City of Palm Springs for exemption from city zoning laws on the basis of tribal sovereignty. Also in Chapter Six, I draw upon maps archived at the Palm Springs City Clerk's Office to help me create a composite map identifying Tribe-owned land parcel locations in Coachella Valley over time, and I draw upon an archived 1939 map from the Southern Pacific Railroad Company to help me plot on the above-referenced map the path of its now defunct railroad track (1880 – 1971) that established Palm Springs as a resort destination located on what would later become Agua Caliente Tribal Reservation land.

3.3 Analyzing and Writing-up

Analysis

I transcribed most interviews on an ongoing basis in California during the fieldwork period. This assisted me in reflecting on the sufficiency of my data collection strategy as the work progressed, thus enabling me to adjust or expand my approaches where beneficial. There was an evolution to this process as I gradually learned more about on-the-ground realities of conservation banking in California. As a result, I discovered unexpected avenues for delving deeper beneath the surface of that conservation banking sector; I do not think I could have known about all of these before undertaking the fieldwork no matter how much prior reading I had undertaken. Although this process did not completely alter the core hypothesis and research questions of my research, they certainly took on more nuanced meanings as I became sensitized to experiences of the humans and nonhumans involved.

Early analysis thus began through the transcription process, but continuous reflection on the data and materials I was assembling also led to discoveries about my own research style—which then fed the analysis. I realized that a part of the process I particularly enjoyed the most was investigation into *why* something was a particular way, thus seeking to uncover the drivers behind circumstances; so, this shaped my research. For example, when I learned through interviews that conservation bankers in California generally do not earn enough from sales of credits alone to justify their high land use costs, this prompted me to examine more closely the other forms of diverse value they gain, which evolved into a major theme ('diversification of value and capital accumulation') as discussed in Chapters Five, Six, and Seven.

Transcription of, and reflection on, data during the early fieldwork period also facilitated some of my latter-stage fieldwork activities. Interviewees, particularly those from conservation governance agencies, offered valuable suggestions for other people to interview and archival documents to locate and evaluate, which extended my fieldwork period slightly. Sometimes such suggestions were immediately evident from a single interview, but others became clear only over the transcription, reflection, and even analysis processes (Auerbach and Silverstein, 2003). For example, an opportunity or avenue to pursue might only become fully evident after later recognizing links between two or more interviewee responses. From drawing such connections, I also began to acclimate to the network of actors, shared terminology, and common practices involved in conservation banking which then enabled me to engage more meaningfully with an extended range of stakeholders—perhaps due to shedding my 'newbie' status.

Analysis of the photographs I took involved looking beyond only how they might be descriptive or illustrative, to assessing the affect they evoke to get at the more-than-representational (Lorimer, 2005; Müller, 2015; Vannini, 2015); this carried limits of course, as it relied primarily on my own subjective determination of the affect evoked. I also tried to work with the many photos I took as a tool toward the larger analysis; Howard Becker (2002) has put forth the idea that photos can serve as a *component of* the analysis because they are "specified generalizations" (p. 5) of themes. Archived documents, on the other hand, were assessed more for the patterns they suggested or for their ability to fill in gaps of information regarding larger patterns such as those recognized from interview data. As Dane (2011, p. 274) writes, "archival researchers deal with people's *products* rather than with the people themselves." In a sense then, my analysis of archived historical documents was sometimes an interpretation of an interpretation; I drew on the documented text or map, as well as context into which it was situated, and by cross-referencing against other related data sources to produce an informed interpretation of the meaning and wider significance.

Following my fieldwork, I used NVivo software to assist in organizing and coding the data I had collected, as per guidance on coding from Maher et al. (2018) and Saldaña (2015). I primarily applied a thematic approach to the coding. This involved a combination of a structured coding themes (i.e. framework analysis), and then emergent coding themes (i.e. grounded theory), because I anticipated some theme categories that would be relevant to helping me answer my research questions (e.g. conservation banking best practices; banked species), but I subsequently also encountered others 'on the fly' that emerged as I worked through the collected data multiple times (e.g. peripheral stakeholder groupings; income stream groupings). For interview transcripts, I also later applied some descriptive analysis, focusing in on particular words or phrases used by interviewees, especially if the same word or phrase was often used by multiple interviewees (e.g. "responsible conservation".

Coding interview transcripts, notes, archival documents, and photos was also used to match and organize them into their relevant case studies and intended chapter groups through separation into Nodes. This became more helpful as the writing-up process progressed through revisions and reorganizations, and I needed go back and move elements around into different parts of the chapters. For example, NVivo proved useful in helping me locate elements such as pertinent quotes efficiently despite considerable reshuffling; things ended up being organized rather differently than I would have predicted when I began. I learned the truth in Crang and Cook's (2007, p. 82) statement that "the categories and similarities on which your system will end up being based will not have been decided in advance but will develop only as you make connections."

The process of analysis and writing-up involved having to make some challenging decisions about what to include, and what to omit. My field work had produced much more data than would be practical to incorporate in my thesis relative to its space and time limit, which I

only later learned was not uncommon (Schiellerup, 2008). In addition to making those pragmatic editorial choices, I also recognized the ethical responsibility involved in such choices. That is, such choices of inclusion (or omission) could potentially influence how the topic in its final form would be perceived by readers. For example, in illustrating key points through focusing on the circumstances of certain nonhuman beneficiaries, I had to reconcile a corresponding non- or lesser-coverage of the experiences of numerous other worthwhile species. Similarly, I was not able to include the voices of all human stakeholders who experience relative benefits or costs as a result of the conservation activities examined; choices in balancing human versus nonhuman coverage also arose.

Perhaps some such dilemmas regarding a researcher's role in influencing the phenomena that become highlighted in a work of research are not entirely avoidable (de la Bellacasa, 2017). However, I have made an effort in the chapters to note awareness of the selectivity of inclusions and to offer justifications where reasonable for focusing on the featured stakeholders; hopefully this does justice to all of those involved (Etherington, 2009).

My reading of the literature also shaped my analysis, including influencing what received more or less emphasis, after having earlier also served as a reference for the design of the research (Flowerdew and Martin, 2013). Specifically, the concepts that I outline in Chapter Two's literature review helped establish a scaffold of core themes around which I committed to prioritizing my analysis of my data. On the one hand, my focus on the concepts chosen came about by reviewing the literature and identifying gaps—and thus opportunities—for where contributions could be meaningfully made while answering my research questions. On the other hand, concepts were also chosen based on there being enough previous research and literature foundation on which to build and to guide me in analyzing my data in those theme areas.

A recognition that a lot of less than perfect factors influence the relationship between nature and society helped me to undertake a critical analysis of market-based conservation in California that is evaluative, without that critique becoming a 'subtractive' form of deconstruction. In other words, I have tried not to hold it up to some unrealistically perfect ideal only to point out the ways in which it falls short. While the critique I have undertaken identifies shortcomings, it has also sought to identify strengths, and to maintain a sensitivity to the logistical realities of both. In this way, it enables conclusory recommendations for improvement [see Chapter Eight] that don't overlook reality or discard components that are already working. Latour (2010) has warned against critique that only subtracts from the world and fails to add anything in its place by expecting perfection and certainty on a planet that guarantees neither; I have aimed to honor this wisdom.

For example, in Chapter Six and Seven I acknowledge finding that the conservation banks commodify and abstract nonhumans from their natural contexts, yet I also acknowledge learning that the Agua Caliente Tribal Conservation Bank enables its indigenous owners to undergo a decolonizing reunification with some of the natures they bank. Critique to me has thus not meant research aiming only to find every flaw in conservation banking, but rather constantly wondering throughout the process if and how my research might contribute toward it being done better.

In fact, throughout each phase of this research, I continuously reflected upon how the findings might be useful in the future; certainly, a goal was to contribute to filling gaps identified in the literature. However, I also reflected on a sense of responsibility that accompanied my choice of a critical research paradigm. Popkewitz (1984) has argued that the purpose of conducting research is not only to describe the world, but also to change the world. While that seems a lofty aspiration, I nevertheless have aimed to produce a contribution that concludes with actionable recommendations. The critical perspective my research has taken, combined with a

research question focus on inequities in the distribution of benefits, sharpened my awareness of the unjust character of the world; groups focused upon in the case studies, both human and nonhuman, exhibited sometimes dramatically different levels of power. Lin (2015) suggests that research with a critical orientation can theoretically help to empower marginalized groups through demystifying institutions, practices, and policies that perpetuate those groups' marginalization.

Several avenues for contributing back came about early in this research process; that is, during the fieldwork. For example, I was asked to return to the Habitat Conservation Planning Branch of the California Department of Fish and Wildlife and give a presentation of my findings and recommendations after submission of my thesis. I also agreed to provide a post-submission summary report of my findings to the California Water Impact Network. I agreed to contribute a summary of my recommendations chapter to the third-party bank management company that manages multiple conservation banks in central and northern California (not my case study banks).

Reflexivity and Positionality

Berger (2015, p. 220) defines 'reflexivity' as:

> a turning of the researcher's focus back onto oneself to recognize and take responsibility for one's own situatedness within the research and the effect that it may have on the setting and people being studied, questions being asked, data being collected and its interpretation.

'Reflexivity' is thus an examination of the researcher's own beliefs, judgments and practices during the research process, and a consideration of how these may have influenced the research.

Jafar (2017, p. 323) defines 'positionality' as "the recognition and declaration of one's own position in a piece of academic work". 'Positionality' thus refers to the viewpoint of the researcher "in relation to the social and political context of the study—the community, the organization or the participant group" (Coghlan and Brydon-Miller, 2014, p. 628).

If positionality involves what the researcher knows, thinks, and believes based largely on his or her biography, then reflexivity involves what the researcher does with, or thinks about, this knowledge or belief. For example, reflexivity could take the form of the researcher questioning his or her own assumptions that may have previously been taken for granted. Reflexivity requires the researcher to give attention to how their own stance may impact or influence the research. Finlay (1998) states that it necessitates an acceptance that the researcher becomes a component of the research. In reflecting on my own positionality in relation to this research, I recognized that what the researcher *doesn't* know can also be part of their positionality that in turn shapes the research.

To explain, prior to undertaking my fieldwork in California, my only knowledge of conservation banking was acquired from reading how it is portrayed in existing literature. Similarly, I had no pre-fieldwork familiarity with the two conservation banks that eventually became the foci of my case studies. I acknowledge that one of the early adjustments I had to make with regard to positionality was recognizing that I could not assume that all I learned from reading the literature had given me an entirely accurate picture of the conservation banking I would find 'on the ground' specifically in California. After all, my focus on California was due in significant part precisely because existing conservation banking literature had not yet focused significantly on California.

I acknowledge that personal connections with individuals in the government of California assisted me in gaining initial access to some high-level interviewees, in particular some executive staff of California's conservation governance agencies. Aside from these, most of my access to interviewees came about through my reaching out to individuals directly. Nevertheless, I also acknowledge that in these instances, I highlighted my role as a doctorate student with the University of Oxford when introducing myself and making interview requests, and this may have positively influenced the credibility with which I was perceived and the success rate with which I gained access to interviewees.

I further recognize that my status as a white, educated, male researcher associated with Oxford may have influenced the way research participants, who were from of a variety of ethnic, gender, and class backgrounds, interacted with me, and possibly how I interacted with them. Such differences also make it possible that my own perceptions of interview responses were not as neutral or objective as I would hope. Some authors (e.g. Al-Makhamreh and Lewando-Hundt, 2008; Ergun and Erdemir, 2010; Liamputtong, 2010; and Merriam et al., 2001) have suggested that researchers should ideally be perceivable as an 'insider' by their interviewees through being matched in terms of sharing similar social, cultural, and linguistic traits—a scenario Ramji (2008) refers to as 'cultural commonality'. However, as the solo researcher, this would not have been possible for me, and I am not sure whether it would have been ideal regardless. Manohar et al. (2017) argue that there is value in being able to recognize the dynamics of some differences; in my research, such differences were often tied to ways different stakeholders inequitably experienced benefits or costs, and were thus directly relevant to my research questions.

As an example of how this might be so, Mellor et al. (2014) write that in recent decades, there has been growing societal pressure to overlook or not acknowledge class differences when interacting with others, due to a decline of class identity politics in neoliberal, meritocratic

societies such as that of the U.S. However, not only were the class variations among research participants in my case studies pronounced,[25] the upward class mobility involved for some was a direct result of benefits from the conservation banks, and so again relevant to answering my research questions. Instead of aiming for 'insider' status, Ganga and Scott (2006) have advocated that the researcher acknowledge differences in class or other background characteristics candidly, and look for other points of commonality as a way of establishing a rapport between the researcher – interviewer and the participant – interviewee. This was an approach I attempted, for example by noting a shared interest in wildlife.

I also recognized the role of language in this research, and my position involving it. For example, English is my native language, and while English is the dominant language spoken in California, Spanish is also widely spoken there among immigrant groups like those who I interviewed in the town of Lost Hills, among some conservation bank workers, and among staff at the Agua Caliente Casino Resort. Cousin (2010), McKinley (2016), and Rose (1997) have noted that language impacts elements of identity, power, and perception in the research setting. For example, my English language style and vocabulary might signal my positionality as a university-educated 'outsider' to research participants such as the Spanish-speaking immigrants of Chapter Six's case study.

Lastly, I observed that the ways in which I was responded to by research participants in Lost Hills and Palm Springs evolved rapidly over time in response to my particular personality rather than only my ethnicity or education level. My personality had an increasing influence on my interactions with research participants; insider – outside barriers seemed to fall away somewhat. Moser (2008) suggests that literature on positionality has tended not to emphasize

[25] For example, the conservation bank owners were billionaires and some of their employees were undocumented immigrants paid poverty-level wages.

exploration of how a researcher's personality affects the research process and outcomes. However, my own experience was that researcher's personality and positionality are linked; in fact, Qin (2016) argues that the extent to which different researcher personalities can lead to the production of different research results needs more attention in the literature.

Conclusion

In this chapter, I have indicated the methodological orientations in which I situated and produced this research, described how the two case studies were chosen, explained the methods I used to collect the data, and discussed my process and experience of analyzing the data and writing up the findings. I have also indicated the ethical standard I followed, and touched on choices I had to make regarding who and what to include, while aiming to represent the research participants fairly. I have also shared how the process of conducting this research involved some evolutions in my approach, in response to a learning curve as well as to my continuous reflection.

CHAPTER 4: THE ORIGINS AND GOVERNANCE OF CONSERVATION BANKING IN CALIFORNIA

During recent years, authors examining market-based conservation have tended to frame conservation banking as a rather singular, uniform model (Boisvert, 2015), characterized for example by conservation credits that always economically represent ecosystem services as commodities that are sold for profit (Scheba, 2018) to achieve no net loss of natural resources (Grimm, 2021). In this chapter, I show that conservation banking, as a term and concept, can in fact be more variable in its interpretation, intentions, and modelling by practitioners based on location, social history, and political economic contexts. I argue that conservation banking in California is unique, having maintained a species-focused approach evolved from American environmentalism origins, but having also developed a political economy shaped by California's neoliberal-capitalism.

I draw on conservation, environmentalism, and neoliberalism literature, institutional conservation-based grey literature, interviews with governance agencies and conservation banks, and archived documents to provide a high-level overview of conservation banking in California that establishes how it came about, and how it currently functions. In section 4.1, I chronologically trace the history and evolution of conservation banking in California to show how it formed from a sequence of cultural and political developments in human – nonhuman relations often driven by an elite circle of powerful men. In section 4.2, I examine how conservation banking was motivated and shaped by California's neoliberal-capitalism. In section 4.3, I discuss the present-day political economy of conservation banking in California, including outlining its governance and clarifying how the banking program actually works.

To the existing literature, I contribute insight into what conservation banking is in California, how its governance operates, and how its distinctiveness reflects a multifactorial

history of socio-political influences. The chapter also contributes attention to the existent functional and geographic plurality of 'conservation banking' as a term and concept, despite often being used interchangeably and characterized generically in the literature. Beyond conservation banking itself, I contribute broader insight into how neoliberal state programs that preferentially cultivate private conservation on land most often owned by elites perpetuate longstanding social class divisions in human – nature relations, which it is hoped will encourage scholars to think more critically about the nexus of neoliberalism and market-based environmentalism with regard to who can afford to participate.

4.1 Conservation Banking in California: Origins and Evolution

Evolving concurrently to the federal institutionalization of conservation outlined in Chapter Two, early Californian conservation was similarly molded by the circle of politically powerful male colleagues on which Theodore Roosevelt exerted influence. From reviewing state-archived documents of then California Governor James Gillet, I located 1908 correspondence between Governor Gillet and President Roosevelt wherein Roosevelt prompted Gillet "as a fellow [sports] hunter" to expand California's existing Board of Fish Commissioners into an agency that would become the California Department of Fish and Wildlife (CDFW).[26] In the document, Roosevelt specified that the CDFW "should focus on selling and enforcing hunting and fishing licenses, as its means of achieving conservation" through controlling species population numbers according to what the agency determined to be ideal (California State Archives, 1908). This was largely done through monitoring of relative balances of species population numbers, and controlling them through hunting and fishing quotas to maintain human-preferred species balances (Heffelfinger et al., 2013; Macaulay, 2015).

[26] The agency was first named the California Department of Fish and Game, changing to "Department of Fish and Wildlife" in 2013 as part of a national trend to revamp the public image of such agencies as also being conservation-minded rather than only being sport hunting-minded (Remy et al., 2013).

This early pattern of shaping California's conservation governance in the image of hunters' and fishers' interpretation of the human – nonhuman nature relationship is useful for understanding the species-focused tradition in which conservation banking in California operates today. Smalley (2005) states that during the 20th century, that interpretation was bound up in associations of masculinity with hunting, and equating conservation with "by the numbers" regulated hunting—all guided by a gendered definition of "sportsmanship." Although much of this has continued into the present day, a key development occurred in California in 1970.

President Richard Nixon's signing into law of the federal *Endangered Species Act (ESA)* in 1973 was not the first such law, nor was it originally conceptualized by Nixon's administration. In my 2018 interviews, California Environmental Protection Agency and CDFW staff stressed that in fact the *California Endangered Species Act (CESA)* and *California Endangered Species List* had been enacted first, three years earlier, in 1970. CDFW interviewees indicated that Nixon had modelled the federal ESA on the California ESA; a CDFW Regional Coordinator (2018) stated that:

> This is a source of real pride for California—that California conceived an Endangered Species Act, and made it state law, several years before President Nixon borrowed the idea to be his groundbreaking national environmental law, which he kind of claimed credit for. We also had an Endangered Species List well before the nation did. I'm not suggesting this is some kind of competition, but yes, it was a milestone environmental law, and we—the state, I mean—we're proud that California created it first.

I identified archived correspondence (1972) between President Nixon and then Governor of California Ronald Reagan that confirmed the above interviewees' assertion: the Nixon administration had received guidance from California agencies including the CDFW on designing the federal *ESA* (California State Archives, 2018). I further learned from 2018 interviews with staff of the Habitat Conservation Planning Branch (HCPB)—the CDFW sub-unit that administers

California's conservation banking program—that they were eventually assigned responsibility for assessing species' 'endangered' status classifications for *California's Endangered Species List*. I suggest that this responsibility, and the state pride expressed above regarding California's *ESA* being 'first', may contribute to California's continued focus on endangered-listed species as the framework for its conservation banking program; that is, the program's CDFW-based governance mechanism is historically invested in a sense of ownership of the California *ESA*, and even the federal *ESA*.

California Becomes a Conservation Banking Forerunner

Conservation banking evolved from wetland mitigation banking (Mead, 2012), which was a logical transition in terms of the existing knowledge base and transferable capacities: whereas wetland mitigation banking involves wetlands only, conservation banking replicates the concept on most other land not classified as 'wetlands' (HCPB, interview, 2018). However, in terms of politics and conservation policy, the progression was more involved. While wetland mitigation banking had developed as a federal program helped by President Bush Sr's enthusiasm, conservation banking at the federal level lacked the same early presidential interest and policy structure. I found that the federal wetland mitigation banking program even lacked an official framework documentation to guide its governance during the 1980s and early 1990s. It only gained a mitigation banking guidance framework document in 1995 shortly after California developed the conservation banking framework documentation discussed below (U.S. Environmental Protection Agency, 1995)[27] .

[27] A federal conservation banking guidance framework documentation was not established until 2003, eight years after California's (U.S. Department of the Interior, 2003).

California, however, had more rapidly taken up the conservation banking concept and set out to develop it into its own state program. In 1995 the California Resources Agency and the California Environmental Protection Agency (CEPA) jointly issued California's *Official Policy on Conservation Banks* as a governance framework document (CEPA Interview, 2018; Wheeler and Stock, 1995). The Governor established the Habitat Conservation Planning Branch (HCPB) within the CDFW to administer conservation bank approval and oversight, and the state's conservation banking program was launched (CDFW Staff Interview, 2018). By 1996, Carlsbad Highlands Conservation Bank in southern California had become the first conservation bank established in the U.S. (Lawrence, 2001).

Also in 1996, the California Department of Fish and Wildlife issued a *Supplemental Policy Regarding Conservation Banks within Southern California* that updated the state's 1995 policy introduced above. It simplified species habitat-based credit calculations, set out a self-monitored approach using bank-authored annual reports, and announced an expansion of conservation banking across California whereby "the number of conservation banks in California will be self-regulated by the free market and willingness of landowners to participate—instead of by the wildlife agencies" (CDFW, 1996; Mann and Absher, 2014). Based upon archived historical notes and communications documents written by the individuals who drafted that 1996 Policy, and to which my access was provided by the HCPB (2018), the Policy's purpose was to make California's conservation banking procedures easy to understand and thus attractive to land owners.

Although both the federal and California mitigation – conservation banking programs were originally centered primarily in an endangered species-focused approach, in the 2000s under the presidential administration of George W. Bush Jr. the federal program evolved in newer directions, whereas California held more to its original course. This divergence has not

been adequately recognized in the literature. I summarize my analysis of the divergence as follows:

1. Federally, President Bush Jr. promoted the proliferation of wetland mitigation banks, but less so conservation banks (Ruhl and Salzman, 2011; Zinn and Copeland, 2007); in contrast, California's program emphasized the proliferation of conservation banks, which outnumber the state's wetland banks.

2. The federal program has increasingly attempted to experiment with and incorporate environmental/ecosystem services concepts—while still juggling attention to endangered-listed species as required by the ESA; in contrast, California's program has mostly maintained the species focus which it knows well and is comparatively less complicated and capacity-intensive to administer.

As part of this divergence, President Bush Jr. established the Office of Environmental Markets (OEM) in 2007 to promote the evolution of credit markets for water, carbon, wetlands, and biodiversity, as well as to support new scientific methods for assessing environmental service benefits (Kragt and Robertson, 2014). The OEM is based within the U.S. Department of Agriculture, because increased U.S. federal interest in environmental/ecosystem services originated out of a federal government desire to quantify and claim them as a side benefit of U.S. agriculture (Schaefer et al., 2015). Dempsey and Robertson (2012, p. 761) view the OEM's aim as being a "neoliberal reduction of federal responsibility for regulating conservation of U.S. biophysical landscapes by shifting it over to the market".

However, my interview with USFWS staff (2018) suggested that perhaps the opposite result had occurred: that is, USFWS staff stated, for example, that the complexity of the

ecosystem services approach to banking has expanded federal agencies' hands-on governance workload and increased the number of regulatory staff required to carry it out. This was supported by what I heard at the National Conservation Banking Conference (2018): current and prospective bank owners from states other than California described requiring frequent dialogue with USFWS staff to resolve their confusion and mistakes, due to difficulty in understanding the federal programs' procedures, credit calculations, and intended outcomes.

Based upon what I learned from my fieldwork interviews and observations regarding California's current conservation banking program governance capacity, with its small staff size and modest annual budget allocation, it might encounter difficulty transitioning from its species-focused approach to anything more conceptually complex; in other words, if it tried to follow the OEM's trajectory. There are currently 108 conservation banks in California (Poudel et al, 2019); California's current governance appears to rely on their simplicity of approach as well as self-regulation and labor contributions by civil society to help keep the state's large program manageable by a small oversight governance structure.

4.2 Banking on Conservation in a Neoliberal Economy

While I have shown in a chronological fashion above that conservation banking in California developed a distinctive character in part from the state's evolving historical-political relationship with nonhuman nature, it has also been formed by the state's neoliberal climate. This neoliberal, capitalist influence results in a current political economy of conservation banking in California characterized in part by the following:

1. Both the nature that is conserved, as well as the conservation process itself, are privately owned and used for capitalist trade and profit;

2. The conservation banks tend to conserve the nature that money can see;
3. Bank owners benefit from tax reductions, subsidies, and other more customized financial incentives offered by the state;
4. Regulation of conservation banking is decentralized, with the state minimizing its own direct role by engaging civil society to take over some of its activities.

These characteristics mirror key hallmarks of neoliberalism and capitalism (Heynen et al., 2007). I show below that they did not form spontaneously, but instead evolved in response to the influence of California's highly capitalist culture, and the neoliberal agenda of its government. I find that two such responses in particular paved the way for conservation banking in California: (a) the development of conservation easements, which neoliberally privatized conservation and engaged civil society actors to participate in its implementation and governance; and (b) a capitalist need for convenient access to a ready supply of conservation credits, which would facilitate investment in California's economy by land developers.

California has long embraced capitalism as a defining aspect of its culture, beginning with the 1849 Gold Rush that in a span of months facilitated California's economic birth, early population explosion, and official recognition as a U.S. state (Walker, 2013). California historian Kevin Starr (2007, p. 72) wrote that "California arose out of enormous materialism…unalleviated by conscious ideals." Starr characterized this materialism as a "get-rich-quick mentality" (p. 74), and the conscious ideals as a "shared cultural sense of obligation to conserve the state's unusually abundant nature" (p. 75), to illustrate the balancing act of these competing priorities.

California's neoliberal governmentality and treatment of conserved nature as a marketable commodity have been evident for example in the state's promotion of Yosemite Park as a mass tourism destination (Holden, 2012), and in the privatization and selling of the state's

natural resources like water. Guthman (2008) argues that since the 1990s the Government of California is the most neoliberal of any state in the U.S., as exemplified by privatization of its water systems, residential electric power, and coastline beaches. This has benefited wealthy Californians possessing the economic and political clout to lobby for terms favorable to their privatized ownership of such assets, in exchange for their assuming some of the attached management responsibility from which the neoliberal state aims to be divested (Fauconnier, 1999). Land, nature, and the conservation thereof have been a large part of this trend (Jonas et al., 2013).

Conservation Easements as a Neoliberal Transition Tool

In my interviews with the Deputy Director of the California Department of Conservation as well as the Deputy Assistant Secretary of the California Natural Resources Agency, both singled out the growth of conservation easements from 1980 as being an important development that smoothed California's transition into conservation banking (Interviews, 2018). Mead (2012, p. 28) similarly refers to the conservation easement as a "gateway" that suggested private citizens might be interested in conservation banking. The Undersecretary of the California Environmental Protection Agency (CEPA) called conservation easements the state's "test case model" for conservation banking, because they tested shifting some responsibility for species conservation from being a government activity to involving a private citizen stewardship role; she noted the logic of this shift because most endangered species in California are located on privately-owned land (2018).[28]

[28] Conservation easements have also been used in other U.S. states, although California is a state where they have been particularly popular [see Table 5], and especially so among individual private landowners. In Colorado, Maine, and Montana, more acres are under conservation easements, but the lands involved are primarily large, vacant, state- and federally-owned expanses (National Conservation Easement Database, 2021).

Table 5. Conservation Easement Prevalence by U.S. State. Source: National Conservation Easement Database (2021).

State	Number of Conservation Easements	Total Area Under Conservation Easements (in Acres)
California	**11,442**	**2,020797**
Alaska	190	208182
Alabama	726	210905
Arkansas	946	371705
Arizona	151	140022
Colorado	6,369	3128341
Connecticut	2,085	108048
Delaware	1,335	132165
Florida	1,307	1177074
Georgia	2,457	1851302
Hawaii	49	39947
Idaho	8,003	370280
Illinois	2,347	258313
Iowa	1,995	218911
Indiana	1,326	115848
Kansas	444	193418
Kentucky	1,015	163026
Louisiana	1,296	445752
Massachusetts	9,525	289429
Maryland	9,611	771710
Maine	2,776	2543048
Michigan	6,402	382957
Minnesota	5,983	948918
Missouri	1,705	214226
Mississippi	1,124	389376
Montana	2,995	3545908
Nebraska	858	176066
New Hampshire	4,887	672363
New Jersey	7,523	285625
New Mexico	358	715250
New York	4,604	1134607
Nevada	78	61596
North Carolina	3,331	939593
North Dakota	2,808	669932
Ohio	1,924	170969
Oklahoma	382	104899
Oregon	748	237218
Pennsylvania	5,000	917750
Rhode Island	1,171	74510
South Carolina	1,057	429056
South Dakota	3,124	979229
Tennessee	871	239596
Texas	1,008	1037900
Utah	320	171632
Vermont	5,386	483614
Virginia	6,483	1258811
Washington	4,083	394481
West Virginia	580	57483
Wisconsin	5,000	495446
Wyoming	934	753824

A conservation easement is a contract that most often redistributes custodial aspects of a land title between the landowner, referred to as the 'fee holder,' and a non-profit conservation organization, referred to as the 'easement holder' (Barrett and Livermore, 1983). Conservation compliance monitoring becomes the responsibility of the non-profit organization easement holder, for which it is paid an annual fee by the state. For most California conservation easement fee holders, their property tax obligations are reduced or even eliminated, yet they can still use the land for some purposes—including residence and income-generating purposes (McLaughlin, 2004). The easement usually continues in perpetuity (Owley, 2011).

By enabling private land owners to gain economic benefits in exchange for making voluntary land use concessions that conserve select species' habitat, a conservation easement helps citizens preserve and accumulate capital by subsidizing costs of land ownership (Lippmann, 2014). For example, a retired Palm Springs senior I interviewed in 2018 summarized her resultant tax benefit thus:

> When my financial planner arranged a conservation easement for land my late husband left to me, it eliminated my property and income tax obligations; these had been so burdensome that I would have had to either delay my retirement, or sell the property—including my home upon it—to pay the obligations. Now, I live in my home and have a large private garden just as always. I had to agree not to build any other structures on the land, which I wouldn't have done anyway. An environmental organization [the non-profit easement holder] comes every March to monitor that the land is meeting the conservation requirements, they photograph everything, and they do plantings and clear dead branches to reduce fire risks. It's a win-win.[29]

The rise in popularity of the conservation easement in California marked the state's neoliberal transition to an increasingly privatized conservation model (Morris, 2008). It even incentivized an increase in the number of non-profit conservation organizations in California

[29] She is not required to open the land to the public; the goal is only to conserve the species that use the land as their habitat residence.

because of the easement model's reliance on them for implementing the monitoring component (Interview, CEPA Undersecretary, 2018). For example, two such organizations I interviewed incorporate airplane fly-overs and aerial photography to monitor for any structures, roads, crops, and other such items that might violate the habitat preservation terms of the conservation easement (Interviews, California Rangeland Trust and Peninsula Open Space Trust, 2018). These reflect monitoring best practices described by Inlander and Hardage (2016).

Often such organizations also engage private citizens as volunteers to assist with on-site easement monitoring activities. I joined and observed two such operations in May 2018 [see Figure 8] to better understand how this neoliberal transfer of conservation governance activity from the state, to civil society, functions. Considering that neoliberalism has been criticized for increasing the gap between wealthy and less wealthy groups (Heynen and Robbins, 2005), the fact that the volunteers I encountered during this described themselves as being nature-loving rental apartment dwellers from blue-collar or fixed-Income urban backgrounds felt poignant. In volunteering to gain the benefits of exercise in fresh air and engaging with the nature absent from their urban San Francisco streets, they were providing free labor on land owned by members of the wealthy capitalist class, as well as helping to preserve the high land values of home owners adjacent to the conserved land.[30]



Figure 8. Conservation easement monitoring, Peninsula Open Space Trust volunteers, Bellvale, San Mateo County, 2018. Photographed with participant consent.

The scenario parallels the volunteer-assisted monitoring approach I observed at a conservation bank to be discussed in Chapter Five, wherein some volunteers participated as part

[30] Which the homeowners can be seen to capitalize upon, for example, by their installation of large picture windows looking onto the unspoiled nature views; homes with such a view command high sales values (Michael et al., 2002).

of an Audubon society rite of membership, and some youth volunteers received credit-hours toward their high school community service requirements to graduate. It also resembles New York park volunteering dynamics suggested by Krinsky and Simonent (2017), wherein 'volunteering' is used to extract free labor from the urban lower classes through conditioning welfare and benefits to volunteering.

Examining the conservation easement as a precursor to California's conservation bank model helps contextualize the neoliberal-capitalist lineage into which the state's conservation banking program was born (Boisvert, 2015). When California set out to develop their banking program in 1995, it was able to draw on a decade of learnings from the federal mitigation banking program, but it was also able to build upon its own existing conservation easement framework and knowledge base. I suggest that this is part of why California was able to develop a large conservation banking program relatively rapidly [see figures 9 and 10]. From a land use perspective, a California conservation bank *is* a conservation easement, but with the addition of sales of credits representing certain species on the land and, and sometimes extra effort made to enhance the species' habitat on the land.

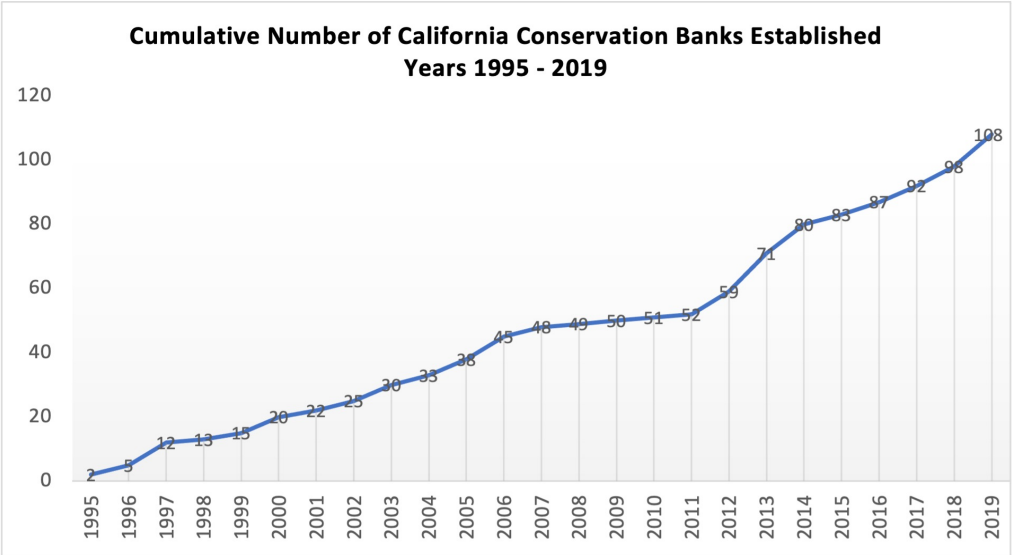


Figure 9. Representation of the rapid growth in California's conservation banking program since its 1995 inception, in terms of the total number of conservation banks established. Data sources: Habitat Conservation Planning Branch annual reports (1996 - 2020) to the California Legislature, the USFWS, and the U.S. Office of Environmental Markets. Updated figures for 2020 have not yet been made available.

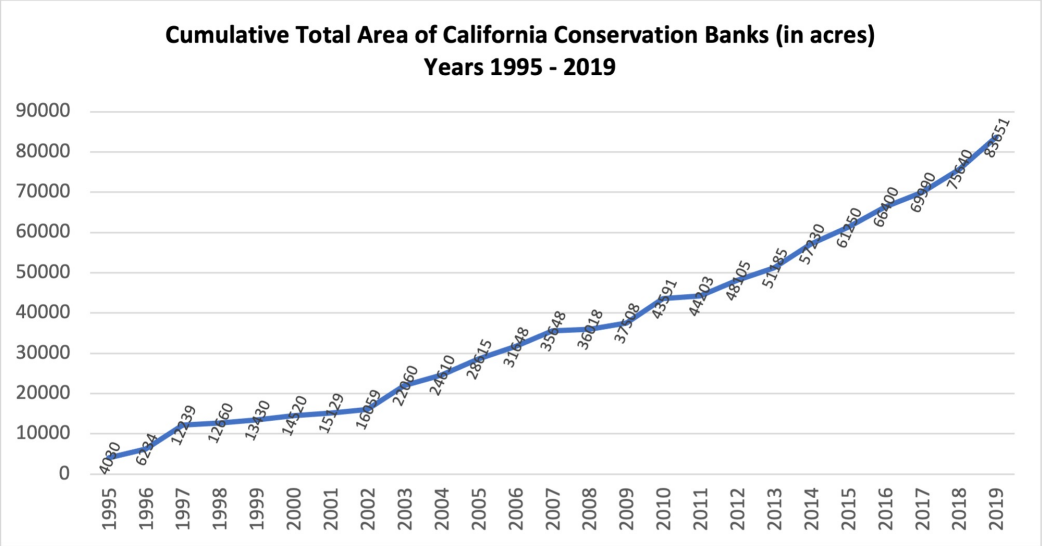


Figure 10. Representation of the rapid expansion of California's conservation banking program, in terms of the total cumulative area of conservation banks established, since the program's 1995 inception. Note: The calculations only represent actual habitat acres included in credit calculations; irrelevant areas that do not support the conserved species are excluded from the charted figures. Data sources: Habitat Conservation Planning Branch annual reports (1996 - 2020) to the California Legislature; the USFWS; and the U.S. Office of Environmental Markets.

State Economic Growth via Conservation

The capitalist, pro-development ambition of California has resulted in a $3.2 trillion state economy that is larger than that of most nations and ranks it as the fifth largest economy in the world behind only the U.S., China, Japan, and Germany (International Monetary Fund, 2019). California's GDP is the highest of any U.S. State (U.S. Department of Commerce, 2017). This economic stature is no accident: it results from the state making income growth and business development a primary government mission, which is in turn incorporated into the mission statements of most California state agencies and programs (Walker, 2001; Scott and Pratini, 1995). Interviewees, including the Deputy Director of California's Department of Conservation (2018), emphasized that, over time, this drives state programs to feed off of each other to meet their various obligations for supporting economic growth; I learned this included the conservation banking program. The Deputy Director explained:

> What you should understand is that California partly viewed building a conservation banking program as an economic advancement tool to benefit the state. CESA [California Endangered Species Act] requires land developers to apply for zoning and/or other permits for most land use projects. Processing of those permit applications includes calculation of any loss to endangered-listed species as per CESA and ESA. The developer needs to compensate whatever the losses are calculated to be under both laws. So, we needed a system here that minimized the headache for the developers to comply with the law and get their permits. Having a network of ready-made conservation banks able to compensate the most commonly-affected listed species serves as an efficient 'service' for developers to pay [buy credits], get approval on the compensation transaction, and move on. If we didn't make it easier for them here, they might take their money and projects to another state with less environmental regulations.

The Deputy Assistant Secretary of the California Natural Resources Agency (2018) provide me with additional insight into how the state's emphasis on supporting economic development has shaped how the conservation banking credit market's functions:

> In other states, developers end up navigating confusing paths when they try to meet their mitigation requirements under the ESA; and yet, the ironic thing is, there is often little, or spotty, enforcement that would actually push them to do so; many don't bother. Here in California, conservation NGOs over much of the state have a watchdog mentality toward any big development projects—they report about them. Developers are risking serious fines if they sidestep this. But, we make it simple for them to get the credits they need: when they apply for a permit they're told if they'll need] credits and how many; they can check the online list of bank options for where they can buy those [credits]. Banks have a salesperson who will then guide them through the process.

Whereas existing literature has tended to focus on how conservation banking as a model enriches the private land owners involved (Bakker, 2005), stakeholders I interviewed such as those above emphasize that it also serves the economic interests of the state, and this played a role in California being the first to roll out conservation banking.

To summarize, my analysis found that the following six factors—combined with California's abiding esteem for nature conservation, of course—interactively drove California to

pioneer a conservation banking program that would help facilitate continued capitalist development and investment in the state, so as to grow California's economy:

1. California's early establishment of its own *Endangered Species Act* had obligated it to enforce compliance within the state under both its own CESA and then the federal ESA as well;

2. California developed the earliest and most extensive set of laws and agency capacities for enforcing CESA and ESA mitigation requirements for land developers as compared with any other U.S. state, and has been aggressive in implementing such enforcement both in terms of investigation and imposition of penalties for non-compliance;

3. California is the continental U.S. state with the highest number of affected rare species;

4. Being highly capitalist, California is the state with the most ongoing land development project activity as measured in affected acres;

5. Because of the factors above, California is the state within which there is the highest buyer demand for species credits to comply with CESA and ESA mitigation requirements;

6. Being neoliberal, California wanted a solution for meeting CESA and ESA compliance without burdening the state.

4.3 The Current Political Economy of Conservation Banking in California: Governance and Function

Having traced the history of socio-political developments that conservation banking in California evolved from as well as having shown how it was influenced by California's neoliberal capitalism, I now examine how these drivers are reflected in the governance policy and functioning of the state's present-day conservation banking political economy. I reveal that how it works is unique from other generic characterizations of conservation banking, with the benefit of context from sections 4.1 and 4.2 that makes sense of *why* it now works the way it does.

Present governance of California's conservation banking is guided firstly by state law that charges the conservation banking program with "the responsibility for mitigating species listed on the U.S. (federal) Endangered Species List, as well as those listed on the California Endangered Species List" (California Fish and Game Code section 1797.5, 2012). The stated mission of the Habitat Conservation Planning Branch, as per the Governor of California, is to administer the conservation banking program with the aim to "improve the status of endangered or threatened species to the point at which the conservation measures are no longer necessary" (HCPB Report to California Senate, 2017). Altering the program's endangered species-focused approach could thus only happen if the existing state law changed (HCPB Interview, 2018).

Regulatory and technical governance responsibility for the banking program falls to the California Department of Fish and Wildlife. Administrative governance responsibility falls to the Habitat Conservation Planning Branch established within the CDFW specifically for this purpose (Interviews, 2018). These two entities represent the historical and neoliberal faces, respectively, of conservation in California.

I found the CDFW to be law enforcement-oriented and still steeped in its past traditions. For example, the staff are predominantly male and wear green and tan uniforms, badges, and hats all designed in the image of Theodore Roosevelt's 1898 military uniform. Some are armed, and many have titles indicating hierarchical rank: Lieutenant, Captain, Deputy, Officer (Fieldwork observations, 2018). The agency's largest focus is and always has been hunting and fishing regulation, but it is also the state's enforcer of the California and federal *Endangered Species Acts.* Using mechanisms such as fee-based permits, fines, and penalties including imprisonment, the CDFW regulates humans' behavior toward nonhuman nature according to precise codes and laws (CDFW Interviews, 2018). In my concluding Chapter Eight, I offer suggestions for future research that would examine in more detail the gendered CDFW agency culture.

In contrast, the Habitat Conservation Planning Branch (HCPB) approaches conservation governance more as a business relationship. The HCPB aims to regulate the social behavior of conservation less through enforcement, and more through reliance on incentives, negotiation, and minimal interference. The HCPB limits its role mostly to setting out the goals and guidelines of California's conservation banking program, managing the initial approval of new conservation bank applicants, and then overseeing from a higher level the self-directed compliance of all program participants with the contracts into which they have entered (Interviews, 2018). Much of these activities are carried out by the HCPB's two full-time staff; for some technically specialized aspects of the work, they draw upon the CDFW's hundreds of staff possessing more advanced ecological training and credentials. The HCPB's Program Coordinator (2018) explained:

> Yes, it's true that part of the original concept is that the program should be largely self-regulating; in fact, we couldn't do more hands-on oversight even if we wanted, because we're a staff of two most of the time. We partner with the [C]DFW staff biologists on technical things, and with senior managers of the other agencies[31] for official issues like contract signings. So, yes, our conservation

[31] Referring to the agencies with whom California's conservation banking program partners: the California Natural Resources Agency; the State Water Resources Control Board; the U.S. Army Corps of Engineers; the U.S. Fish and

> banking program was intentionally meant to be low-maintenance in terms of not overstretching government resources like staff time, funds, office space. Most of what makes that possible is the way it's set up, screening applications so only highly capable banks get approved to offer credits, and then checking their annual [self-] reporting to make sure the banks live up to their contracts.

HCBP governance as described by this interviewee is largely consistent with neoliberal principles; for example, it privatizes the conservation involved and decentralizes its regulation such that only minimal state human resources and overhead are required to maintain the large program. Even the vocabulary, such as 'banks', 'credits', and 'market' suggest theoretically neoliberal aspirations (Boisvert, 2015). It also incorporates the neoliberal practice of handing over to civil society actors some responsibilities which might otherwise belong to the state. For example, the banking program generates income for the state because every bank applicant must by law pay a fee to the state for review of their application (California Law *SB 1148*); I learned that some of the application review process is actually outsourced to non-profit organizations (Interview, HCPB, 2018; Interview, Nature Conservancy, 2018; Interview, California Waterfowl, 2018).

The Land that Becomes a Conservation Bank

I now turn to the matter of which land becomes a conservation bank in California. From interviewing the HCPB Program Coordinator (2018), I learned that the primary criteria the department uses for evaluating a new conservation bank applicant are aimed at selecting banks capable of succeeding self-sustainably over the long term. The criteria include:

Wildlife Service; the U.S. Environmental Protection Agency; the U.S. Department of Agriculture - Natural Resources Conservation Service; and the National Oceanic and Atmospheric Association - National Marine Fisheries Service.

1. *Species habitat suitability*: A potential bank site must be able to provide habitat suitable for sustaining the particular species for which mitigation credits will be offered. If the existing habitat requires rehabilitation or recreation in order to provide fully suitable habitat, the applicant must present a feasible plan to achieve this, and demonstrate their technical and financial capacity to execute that plan.

2. *Location and size*: Large or contiguous-area bank sites are preferred over smaller or isolated ones; the site should be large enough to accommodate the habitat range of the mitigated species.

3. *Manageability*: The bank owner or manager must demonstrate the technical capacity to properly manage the continued wellbeing of the conserved species.

4. *Permanence*: The land owner must guarantee sustained management of the bank habitat in perpetuity by documenting a conservation easement in place on the land title.

Bank applicants must assemble an application that includes a legal description and map of the land site; indication of the proposed species to be conserved; documentation of the applicant's habitat management technical capacity; a conservation easement that preserves the land in perpetuity and names a non-profit conservation organization as the easement holder; and financial documentation showing resources sufficient in perpetuity for continuous maintenance of the habitat (HCPB Interviews, 2018; HCPB documents archives, 2018).

I learned from the HCPB Program Coordinator (2018) that in addition to all bank applicants being charged application fees, applicants often must provide multiple revisions of some of the above application materials over the months-long review and negotiation process.

As preparing these materials would usually require engaging professional expertise services, and the application fees alone exceed $45,000 USD, this application process—much like the land criteria—perpetuates California's neoliberal agenda by favoring those possessing the supra-normal capital to participate, and by then solidifying their hold on land wealth. Specifically, my analysis finds that this conforms with neoliberal principles in three noteworthy ways:

First, the above criteria aim to identify and select private land owners who possess not only the appropriate land, but also the considerable financial resources and access to technical capacity to enable them to undertake all necessary activities *without relying on or burdening the state's resources*. I found in my fieldwork that most banks were indeed owned by wealthy and politically connected individuals or groups.

Second, the bank criteria above show that the state intends for *the conservation activity itself is to be privatized and owned by the conservation bank owners*. The current political economy of conservation banking in California perpetuates the control and ownership of conservation in the hands of the elite class who I showed in section 4.1 and in Chapter Two to have dominated conservation ever since that group institutionalized U.S. conservation more than a century ago. That is, since the institutional design has been undertaken by the elites, it is set up to continue favoring subsequent elites.

Third, as Chapters Five, Six, and Seven will detail, *the state rewards* those who are able to commit their land and other resources to the conservation banking program with diverse opportunities and benefits that facilitate their further capital accumulation.

Best Practices

I learned from multiple stakeholders that California's program focuses prescriptive governance more heavily on the bank establishment phase, rather than on subsequent management, of conservation banks (Multiple Bank Manager interviews, 2018; HCPB staff interviews, 2018). California's development of stated best practices for conservation banking is rather limited as a result. The HCPB Program Coordinator (2018) explained:

> We think our bank application screening process is rigorous, and multiple agencies co-sign on most application approvals, so the department feels confident that good bank management will follow post-approval without further hand-holding from us.

She provided the following two guidelines as being their 'best practices' in their entirety; both address only new bank establishment issues:

1. Prospective banks should ideally attempt to determine in advance what nature resources, habitats or species are likely to be impacted in their site's vicinity in the future, as well as surveying what existing bank credits may already be available nearby to mitigate impacts to those resources, habitats or species.

2. Banks should ideally propose sites that contribute to or are part of a larger, regional conservation strategy, through their proposed site's being contiguous to other conserved lands" (CDFW-HCPB, 2014).

Several interviewees from non-profit conservation stakeholder organizations said California's banking program lacks robust best practices development and also cited its absence

of benchmarking as “a real issue” and a “concern” (Interviews, Center for Biological Diversity, 2018; Environmental Council of Sacramento, 2018). Conversely, other stakeholders said the program “works fine the way it is” and appreciated the state’s “not imposing a bunch of rules telling us how to do everything” and “not assuming the government knows best” (Interviews, Westervelt Ecological Services, 2018; Sutter Basin Conservation Bank, 2018).

Whereas stakeholders I interviewed were divided on this topic, existing literature has tended to lean towards the critical. For example, Bunn et al. (2013) cite a lack of clear standards and regulations as the greatest weakness of California’s banking program. Gamarra and Toombs (2017) find that the standards and practices of California’s program are not aligned with international principles. However, it was emphasized at the National Conservation Banking Conference I attended in 2018 that there currently is, in fact, no definitive, sector-wide agreement on accepted standards or principles for conservation banking; these vary by country and, in the U.S., even by state.

Monitoring and Evaluation

From interviews, I learned that monitoring and evaluation in California’s conservation program consists primarily of self-guided annual reporting; CDFW staff provided for my review their current conservation bank contract template [“Habitat Conservation Plan”], into which a reporting section is incorporated. This leads each bank through providing information on that year’s activities and counts of species individuals, and documenting the condition of the conserved habitats. Bank managers I interviewed indicated that they made use of volunteers to help conduct such counting, sometimes under the direction of a third-party consulting firm. Both CDFW staff and some banks’ staff cited monitoring and evaluation when asked during my interviews if California’s program had any areas needing improvement (Sector interviews, 2018).

Barrows et al. (2005) and others have developed and proposed potentially improved models for monitoring in conservation banking. These have included models for predicting species population trends, such as Integrated Population Models; incorporation of ecosystem services calculations with population counts to create a hybrid formula framework; a model based on indices of biotic integrity (Trebitz et al., 2003); and a model based on ecological integrity monitoring (Parrish et al., 2003). None of these have been taken up; Barrows (2005, p. 1333) found the California banking program's monitoring focus to be specific only to compliance with the federal and California *Endangered Species Acts*, so alternative measurement models have all been rejected:

> as a result of regulatory limitations. The ESA is explicitly focused on each species and its habitat, not communities, nor large scale processes, nor threats. Models such as an ecosystem approach fail to provide species-specific data needed to show ESA compliance.

This statement provides further insight into California's adhesion to the endangered species focus for conservation banking, while also showing that California's neoliberal attitude extends beyond implementation, to monitoring. That is, the state needs banks to report species population numbers in order to help ensure CESA and ESA compliance, but it prefers not to dictate details to the banks about how to determine such numbers (CDFW Interview, 2018).

California's Conservation Credit Market

Rather than dynamic or interactive, I found California's conservation bank credit market to be characterized by minimalist functionalism. The Habitat Conservation Planning Branch acts as the central provider of market information to connect buyers and sellers of bank credits. HCPB

staff maintains a list of all approved conservation banks in California, which it publishes online and updates periodically (HCPB Interviews, 2018). The list indicates the bank names, their size in acres, the species and habitat types they conserve, the type and number of species or habitat credits they have available for sale, and the contact information for each bank's sales staff (Personal review of bank credit list provided by HCPB, 2018).

Credit-buying developers contact the relevant bank staff directly to transact a credit purchase. The market thus exists more conceptually rather than physically, buyers and sellers are unlikely to ever meet in person, and their interactional relationship is brief; the commodity exchange is completed by phone or email and written agreement (Multiple bank manager interviews, 2018). The transaction itself consists of payment by the buyer to the selling bank, who in return provides the buyer a sales receipt to be filed with the HCPB and the developer's local permit-issuing government office for approval (HCPB Interview, 2018).

California's approach to quantifying and translating nonhuman nature into conservation banking credits is as uncomplicated as its market: it uses 'acre of habitat' units in a 1:1 ratio as the currency for conservation credits; one credit represents one acre of habitat. For this 1:1 ratio, the amount of habitat (in acres) or the number of endangered- or threatened-listed species individuals (converted to habitat acres) to be conserved at the bank will compensate for the same amount of habitat (in acres) that is harmed or the number of listed species individuals that are estimated to be lost at the development site (HCPB interview, 2018). For converting the number of species individuals into habitat acre units, CDFW staff have determined the amount of habitat acres that each listed species requires for life; 'life' involves consideration of the species range including *some* migration (CDFW staff interview, 2018).

Quantification via 'habitat acres' tends to favor conservation banks being large, providing enough contiguous habitat. Because of land development density patterns in California, I found that most conservation banks are located in rural areas where large enough areas of undeveloped land still exist (Multiple bank site visits, 2018). Consequently, when rurally banked nonhuman nature is conserved in compensation for nonhuman lives lost to urban development, there may be a geographic and social distance between the two. The distance can be hundreds of miles, as I learned by driving to several quite remote banks during my fieldwork; such dislocation of the natures involved is one of the environmental trade-offs or compromises that help to continue California's capitalist growth. However, I consider the impacts of these distances as a key concern in Chapter Seven.

Although the credits for different species sometimes vary slightly in price in relation to their supply- and demand-based desirability, I learned that conservation bankers are free to set their prices-per-credit as they see fit, and there are little signs of market price competition. For example, the case study conservation bank in Chapter Five set all 3,267 of its conservation credits at $15,375 per credit regardless of which species or habitat is represented, and regardless of credit prices offered by other banks for the same species; once set, those prices were never increased. By analyzing historical credit list pricing for California spanning from 1996 to 2019 I found that the price of any particular credit, once set, rarely fluctuated over time in this market [see Figure 11]; some credits had been for sale for *years* (Review of California credit listings, 2018; 2021). Poudel et al. (2018) found similar results not only for California, but for conservation banking across the U.S.

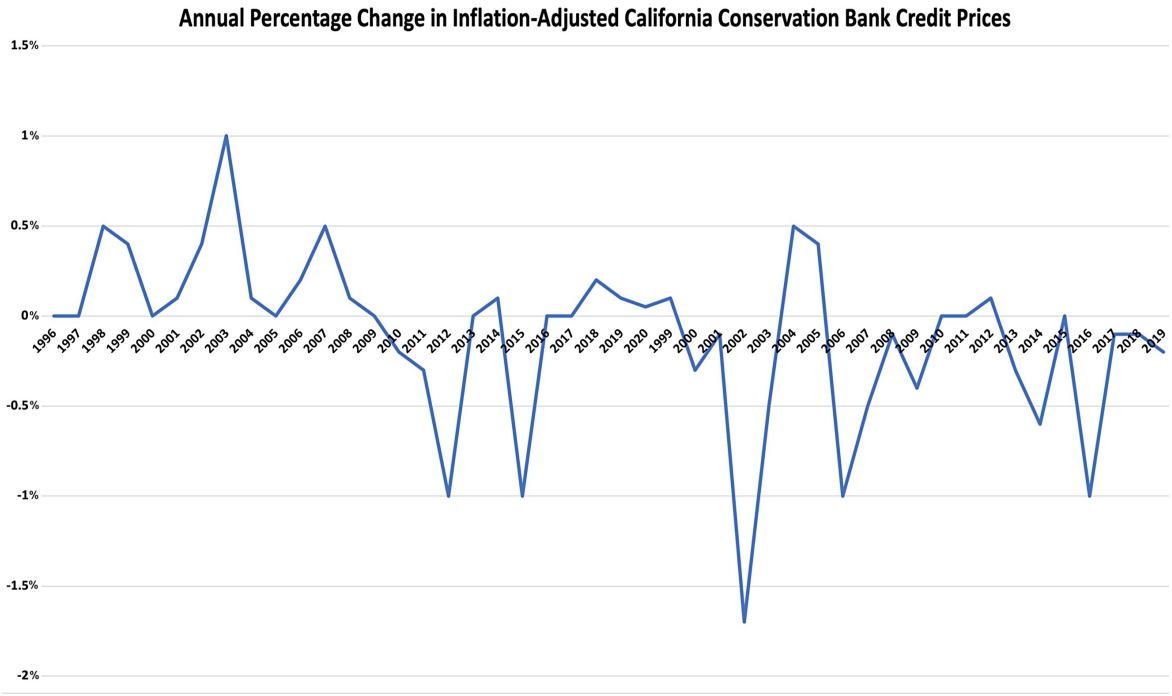


Figure 11. Annual fluctuations (shown as percentages) in California conservation bank credit prices (adjusted for inflation) over time from 1996 through 2019. Note the relative stability, with the largest change ever still being less than 2%. Source of data: historical credit price records for all California banks as archived by the Habitat Conservation Planning Branch. The primary cause of even these minor price fluctuations was often the entry of new banks' credits onto the market each year.

Although authors such as Parkhurst (2011) have emphasized the role of 'free market *competition*' when characterizing conservation banking, I encountered little during my fieldwork to suggest that California's conservation banks experience much actual sense of competition in the credits market on the basis of dynamic factors such as quality or price. In fact, the more likely factor identified that could influence a developer to pick one bank over another offering credits for the same species is geographic location, as California's conservation banking program states a preference for credits that are banked as close as feasible to the development location (*Official Policy on Conservation Banks, 1995)*. As a 'competition' factor, location is not something banks can change dynamically to 'compete'. The HCPB Program Coordinator (2018) put the relative role of the market into perspective, saying:

> I know the idea of the conservation banking 'market' gets written about and kind of stressed, and actually I know when this program was set up the market aspect

> was promised to be a big deal—like it would take the place of rules and regulations or something. But much of the activity that goes into conservation banking is not just about the buying and selling of credits; that's a transaction that involves a brief time, and the first time you sell the credits, that's it, over, done, those credits can never be bought or sold again. So, it's smaller than it's portrayed relative to the months and years that go into maintaining the habitats, dealing with problems that come up like predators getting in and eating your species, weather issues like too much or not enough rain, and the biggest: rogue neighbors.

This comment is reflective of arguments made by Dempsey (2016), that the 'market' in market-based conservation tends to be overestimated by critical scholars.

Krugman (1996) has argued that neoliberal governments often place an absolutist faith in markets as a regulatory substitute for direct state involvement, even in contexts where this faith has not been justified by evidence. I learned from multiple interviewees that a few higher-level state officials had conceived California's program for conservation banking according to such absolutist market faith, without input from potential stakeholders that would be involved in its day-to-day mechanics and management. Mann and Abshur (2014, p. 75) corroborate this, finding that governance policy for conservation banking in California "was negotiated within a closed circle of actors disconnected from real world local contexts." Conservation banks I interviewed did not recognize 'the market' as a regulatory influence on their behavior; rather, they cited not wanting to jeopardize the money-saving benefits of their land's conservation-protected status as motivation to self-regulate their behavior (Interviews, 2018). One bank manager clarified:

> HCPB staff just want you to submit your Annual Report by the due date, we don't often see CDFW people. Maybe an email once in a while from HCPB about some issue: neighbor complaints, species additions, an easement matter. The federal [U.S. Department of] Fish and Wildlife [Service] biologists coming around is spookier; they're pickier, they could cancel a bank contract, definitely! But the thing is, there's also rules from multiple government offices about the land itself—red tape, costs; it's on you to either learn all these rules and navigate them or else the land becomes a liability instead of an asset (Interview, 2018).

This interviewee's comment highlights two points: first, even in its aspects that do not precisely match neoliberalism, California conservation banking is consistently capitalist, with land ownership being critical; second, land use for conservation banking carries with it both the institutionalized myriad of federal, state and local regulatory issues that would be attached to most any land, as well as additional rules specific to land used for conservation banking. Consequently, Californian governance of conservation banking overlaps or combines with the state-, county-, and city-level neoliberal-capitalist governance of land use in a way that is at least somewhat particular to California; as it would be particular to any state or country (Interview, Department of Conservation, 2018). I argue here for literatures to better recognize conservation banking's diversity of practices and characteristics related to local governance issues such as land use regulation, which may carry more influence than the neoliberal market forces that are sometimes spoken about as if universal. Neil Brenner and Nik Theodore (2002, p. 349) argued that neoliberalism should be understood in its situated and differentiated contexts:

> In contrast to neoliberal ideology, in which market forces are assumed to operate according to immutable laws no matter where they are "unleashed," we emphasize the contextual embeddedness of neoliberal restructuring projects insofar as they have been produced within national, regional, and local contexts defined by the legacies of inherited institutional frameworks, policy regimes, regulatory practices, and political struggles.

Boisvert (2015, p. 134) similarly writes that in existing literatures, authors have too often jumped on to trending or flashy themes involving the market aspect of conservation banking, overlooking the perhaps duller, but substantial, particulars that might portray both it more accurately and more fully:

> The pro-market narrative featuring conservation banking systems as market-like arrangements as well as their denunciation as instances of nature commodification tend to obscure their actual characteristics.

Conclusion

This chapter shows how and why California came to have the first and largest conservation banking program in the United States, and how its present-day character and functioning is deeply influenced by the past conservation politics from which it evolved. At the same time, it also reveals that the program serves a specific economic purpose for the neoliberal-capitalist state of California, to provide a ready supply of conservation credits so that developers can invest in the state's economy while complying with state and federal *Endangered Species Act* requirements. This context-reflective specificity in the current political economy of California's conservation banking program confirms that conservation banks are not generic and uniform, but are likely to vary according to their own unique contexts.

I have contributed to the existing literature a more detailed depiction of what conservation banking is in California, and how it works, than has been available thus far. This in turn contributes a greater attention to the plurality of 'conservation banking' as a concept, which both Boisvert (2015) and Madsen (2010) have argued has been much needed, so that future discourse on this topic might take the full range of conservation banking characteristics and variations into account when examining this intriguing market-based approach. I have also contributed an analysis that shows that a market-based model like conservation banking is not just reflective of generic neoliberalism; its neoliberal character is specific to the way a neoliberal agenda is manifested in a particular context, economy, location, and government. Finally, I have contributed to better understanding of the real nature and role of the 'market' in conservation banking.

Having established the historical background and current circumstances of conservation banking in California, I now turn to my exploration directly inside this world through focus on

case study banks that offer much insight into how this conservation model actually works in the state where it started, and has flourished. The Kern Water Bank Authority Conservation Bank offers virtually all the components we have been led to expect from neoliberal conservation: state-facilitated privatization of natural resources (water); privatization of conservation; enclosure and protected area status; capitalist land owners, and reduction of access for less powerful groups based on socioeconomics and race. But, it also offers more surprising insight into the diversified benefits derived by conservation bankers that stretch far beyond monetizing the actual conservation involved.

CHAPTER FIVE:

MORE THAN CREDITS—CONSERVATION BANKING NETWORKS OF VALUE DIVERSIFICATION

Introduction

Having provided an overview of the origins and governance of conservation banking in California in Chapter Four, I now undertake a more concentrated empirical analysis of a specific case study conservation bank—the Kern Water Bank Authority Conservation Bank which I introduced in Chapter Three. Through engaging with discourse on the politics of value (e.g. Pierre Bourdieu, 1983; 1986), and debates over how neoliberal-inflected capitalism shapes the privatization of conservation and natural resources (e.g. Neil Smith, 2007; Jessica Dempsey, 2016; Erik Swyngedouw, 2013; 2015), this chapter explores the plurality of potential capital accumulation avenues available to owners of conservation banks in California. While the particular avenues may be unique to the circumstances of each bank, the plurality is a shared commonality across much of the sector. I argue that profits or benefits from conservation banking in California often do not result solely from the sale of conservation credits, but rather can and do multiply through strategies of value diversification.

Creating value through diversification in this sense involves cultivating multiple streams of economic, cultural, and social benefit that, synergistically combined, provide greater reward than could be realized from the individual benefit streams. I thus contribute to the literature on market-based conservation models a more holistic approach to conceptualizing the way conservation entrepreneurs profit from conservation banking. This has implications for how biodiversity banking models are designed and evaluated, in light of looking beyond credits sales or even financialization as a singular measure of success or sustainability.

I first step back in time in section 5.1 to trace the complex circumstances under which the Kern Water Bank Authority Conservation Bank came about, through a 'water bank – conservation bank swap' that privatized state water and linked the bank to ecological compensation for biodiversity loss at the Sacramento-San Joaquin Delta. I then examine in section 5.2 some of the strategies the bank's owners employ to derive maximum and diverse economic, cultural, and social value from their conservation bank entrepreneurship. Finally, in section 5.3 I analyze how the neoliberalization of nature in this case study impacts the surrounding human stakeholder groups; a focus on the nonhumans involved is undertaken in Chapter Seven.

The owners of this conservation bank, the second largest in California, are also the owners of California's highest earning agricultural company, the Wonderful Company (Arax, 2018; Picard, 2018). This is relevant because the two are intertwined, but also because agriculture and biodiversity banking are so closely interconnected in the U.S. governance framework, as I introduced in the previous chapter and which is exemplified by the Office of Environmental Markets being a sub-department within the U.S. Department of Agriculture. The Wonderful Company is comprised of a diversified group of brands produced on their San Joaquin Valley agricultural land, including: POM Wonderful pomegranate juice, Wonderful Pistachios and Wonderful Almonds, Wonderful Halos (citrus), JUSTIN Wines, Landmark Wines, and Teleflora flowers. Wonderful Almonds are California's second largest agricultural export only after dairy (California Department of Food and Agriculture, 2020). What primarily links the conservation bank and agricultural brands all together is the water that is diverted away from the Sacramento-San Joaquin Delta, transported 280 miles, and then stored directly *beneath* the conservation bank's land surface in the Kern Water Bank. Consequently, tracing the origins of the conservation bank and the Kern Water Bank itself is where examination of this case logically begins.

5.1 How Privatization of State Water Built a Conservation Bank

The Kern Water Bank Authority Conservation Bank (KWBACB) land has a history of state-enabled enclosure for capitalist purposes that have preferentially benefitted advantaged groups. From archived land records, I found that the U.S. Government had appropriated the land from the Southern Valley Yokuts Indian tribe under the *Indian Appropriation Act,* so that white European farmers could then claim and settle parcels under the *Homestead Act of 1862* (Bureau of Indian Affairs-Sacramento Archives, File BIA C48410, 2018; State Lands Commission Archives-Sacramento, 2018). Over the following century, the land underwent serial ownership by increasingly wealthy farmers who gradually consolidated until all of the land parcels came to be re-joined under ownership of just two individuals (Kern County Assessor-Recorder, Hall of Records, 2018; Pisani, 1984). In 1988, all of the land was purchased by California's Department of Water Resources for California's State Water Project, due to identification of an aquifer beneath the land having groundwater storage capacity of more than 1.5 million acre-feet or 2,222,021,958,885 liters (Meillier et al., 2001).

California's dry and drought-prone climate renders the southern two-thirds of the state chronically short of water, and increases the value of water both as a public good and an economic commodity (Thompson, 2011; Johnston, 2003). Consequently, the Department of Water Resources planned to develop the land into an underground water storage facility that could bank water collected from northern California in heavier rainfall years to be later distributed in Kern County and southern California in drought years (State Water Project, 2010; Interview-Department of Water Resources, 2018). The site's location in Kern County was ideal for this, at the junction between the Kern River and the California Aqueduct which carries water southward from the Sacramento-San Joaquin Delta to supply all of central and southern California (Interviews-CDFW, 2018; University of California-Davis, 2018; MacDonnell et al., 1994).

The Aqueduct is what has enabled the capitalist development and sprawl of Los Angeles and neighboring cities despite that region having little water of its own (Erie and Brackman, 2006).

California's Department of Water Resources invested five years and USD $98 million trying to develop a functioning water bank on the property. Unfortunately, the project encountered funding problems (Center for Biological Diversity, 2010), and the project's remote location 244 miles from state capitol offices in Sacramento was also logistically difficult for government-based staff to manage from a distance (Environmental Working Group, 2005). The final straw came when the Department of Water Resources failed to gain necessary federal environmental permits from the U.S. Fish and Wildlife Service (State Water Project, 2010). In 1993, the Department of Water Resources aborted the failed, unfinished project (Center for Biological Diversity, 2010).

In 1994, California's Department of Water Resources set out to transfer ownership of the land and water to a local entity in hopes that they might have more success in completing the water banking facility and managing its local distribution of water (Interview- California's Department of Water Resources, 2018). A transfer negotiation meeting was set and drew attendance by just two Kern County water agency representatives and two private agribusiness capitalists,[32] who argued on behalf of the agriculture sector that more dedicated water allocation was needed to ensure agribusiness' survival in the face of California's prolonged drought (Interviews SR, CK, 2018). Among my fieldwork interviewees was one of the original meeting participants (now Executive Director of California Water Impact Network), who described witnessing the transfer that privatized this land and the water that would go with it:

> The state had become exasperated with the project and wanted no more responsibility for it. So that's how a couple of private citizens got seats at the negotiation table,

[32] The husband and wife owners of the Wonderful Company.

> because they had the wealth and the connections with Senator ****[33] to be able to get the project done. They presented a convincing argument that state water quantities were shrinking fast and their getting the Kern Water Bank operational would save central and southern California from collapse of their water supply (Interview, 2018).

The result of these negotiations was the *Monterey Agreement (1994)*. Under its terms, ownership of the water bank land and future water was transferred to a 'joint powers authority' partnership comprised of two tiny public water agencies and one privately-held company that owns the majority stake (Interview CK, 2018). That joint powers entity came to be named the Kern Water Bank Authority, and the majority owners are the agribusiness couple who went on to build the Wonderful Company (Quinn, 2008; Kibel and Epstein, 2002).

In order to capture, recharge, store underground, and use of all the state water to which it now had access, the Kern Water Bank Authority's owners needed to complete construction of canals and pipeline infrastructure that the Department of Water Resources had begun. In my 2018 interview with the KWBACB's co-owner, he explained the challenge:

> We couldn't even begin the work without first gaining the environmental permits from the California Department of Fish and Wildlife and the U.S. Department of Fish and Wildlife; I was actually pessimistic—if the [California] Department of Water Resources couldn't get the permits, how could we expect to get them? But, they offered us the environmental permits in exchange for us developing above-the-ground areas of the property as a conservation bank [See Figure 4 below]; we naturally agreed! It was luck and timing: this was when the Governor [of California] had just started a push to build up a state conservation banking program.

Here, the neoliberal state used the process of privatization and enclosure of public water and nonhuman nature as a means to grow a new capitalist form of market behavior for conservation in California, through banking and selling credits representing that nature (Ahlers,

[33] Anonymized.

2010). The capitalist owners of the KWBACB succeeded in acquiring the necessary environmental permits and getting the Kern Water Bank infrastructure completed within months, something the state had failed to accomplish over five years (Interview SR, 2018). Proponents of neoliberalism often argue that privatization is more efficient than state governance (Bloom, 2017). In this case, that initially proved true.

However, researchers including Lo Storto (2013) who have examined the efficiency of water privatization found that while initial establishment of infrastructure was more efficient than state-owned, state-run water, subsequent distribution of the water was more likely to prove problematic in terms of equitable access for all the rightful recipients. That drawback has also proven true for the Kern Water Bank, as will be seen in sections 5.2 and 5.3.

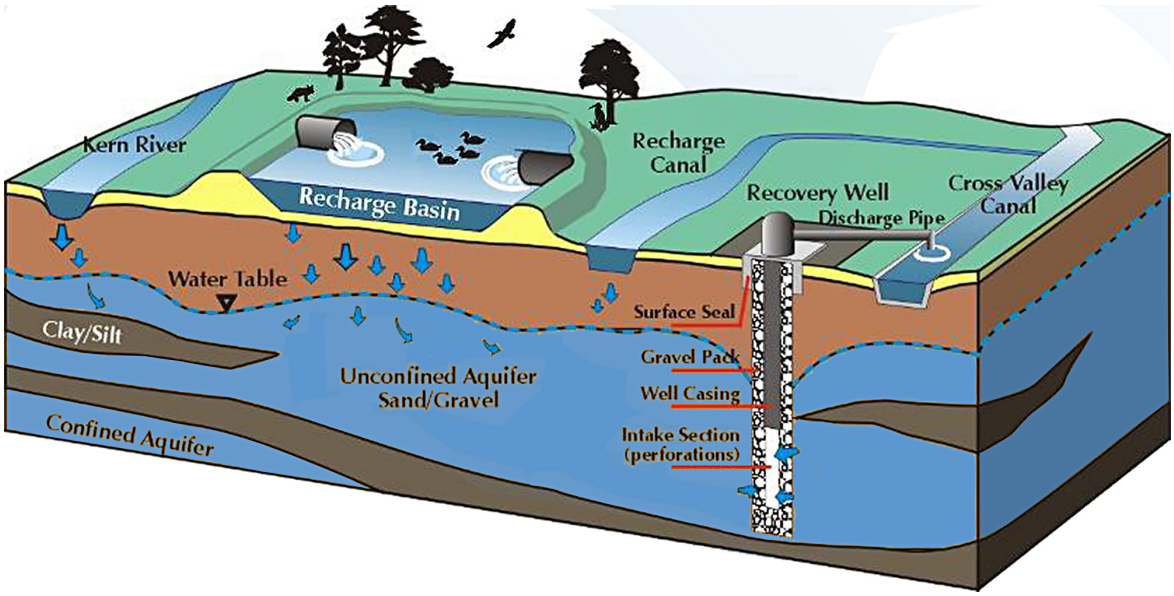


Figure 12: Visualisation of the bank's above-ground and below-ground configuration and infrastructure. Species and habitat conservation above ground, water banking beneath ground. Composite diagram assembled by Gregory Anderson (2018) from fieldwork photographs plus archived University of California components.

The Kern Water Bank is now the largest groundwater recharge and water banking facility in North America (Meillier et al., 2001). About half the water it receives would otherwise flow naturally into the Sacramento-San Joaquin Delta located 280 miles to the north, after originating

from Mount Shasta Lake farther north (via the Sacramento River), and Yosemite and the Sierra Mountains to the northeast (via the San Joaquin River). At the Sacramento-San Joaquin Delta, diversion of the water [see Figures 13 and 14] is carried out through a complex infrastructure of State Water Project dams, pumps, levees, and canals that gather and re-route the water southward via the California Aqueduct (Marchetti and Moyle, 1995; California Department of Water Resources, 2018).

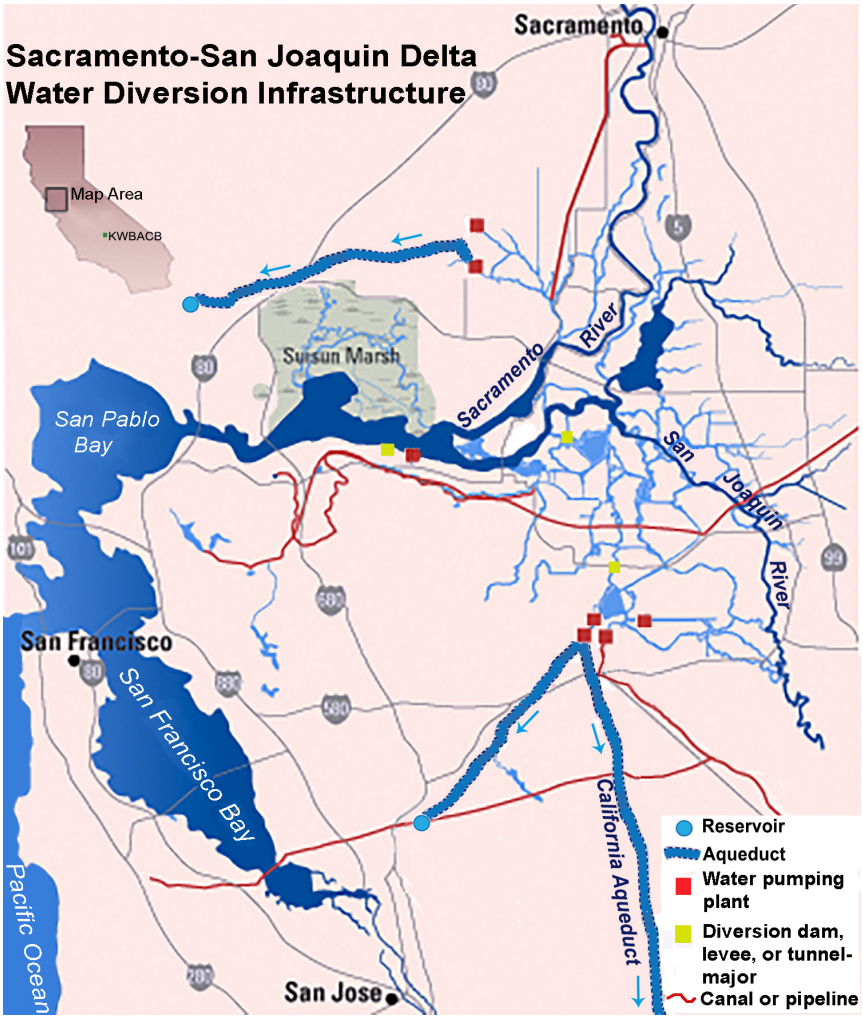


Figure 13. Mapping of main water diversion system infrastructure at the Sacramento-San Joaquin Delta, which collates water for southward transport via the California Aqueduct. Composite map assembled by Gregory Anderson (2018) from State Water Project diagrams and Google Maps.



Figure 14. The full length of California Aqueduct from its point of origin at the Delta, though the KWBACB, to its terminus near San Diego. Composite map assembled by Gregory Anderson (2018) from State Water Project diagrams and World Atlas.

The Sacramento-San Joaquin Delta is the largest estuary on the west coast of North America, covering an area of 1,100 square miles and being home to 500,000 human residents and 500 plant and animal species numbering in hundreds of millions of individuals (Department of Water Resources, 2008; Emmett et al., 2000). Over decades, the Sacramento-San Joaquin Delta's ecosystem has been gradually weakened by California's 'State Water Project' diversion of freshwater from the Delta to the water-challenged southern portion of the state, including to and through the Kern Water Bank (Newman et al., 2018; Sivas et al., 2017). Reduction in Delta

freshwater allows tidal forces from the Pacific Ocean to push seawater eastwardly inland into the Delta, increasing the Delta's salinity (Jayasundara, 2020; Lund, 2016; Monsen, 2007). The resultant adverse impacts to habitats across the Delta must by law be offset in accordance with the *Clean Water Act* of 1972; adverse impacts to the Delta's species' must also be offset in accordance with both the federal and California *Endangered Species Acts.*

The KWBACB shares responsibility for helping to accomplish part of that compensation, along with two smaller conservation banks: the French Camp Conservation Bank and the Liberty Island Conservation Bank (Interview – KWBACB Manager; Interview – California Department of Fish and Wildlife, 2018). However, the scope of the KWBACB's partial compensation is modest relative to the size and biodiversity of the Delta. The KWBACB staff (2018) explained:

> The decline and loss that has been happening in the Delta's ecology is on a large scale that makes it tough to quantify, though some groups have claimed to have done so. Their findings differ, plus there are several hotly-contested theories about the causes of the Delta's habitat loss in the first place. But everyone agrees the Delta is in crisis. So, our conservation credits have been bought by housing developers there, but we're also compensating Delta bird species.

The KWBACB owners' use of Delta-diverted water for irrigation of their agribusiness lends a circular quality to their conservation bank's offsetting impacts of the very water diversion from which they benefit. However, I show in Figure 15 below that their role is just part of a longer-standing circular history wherein ecological crises at the Delta have for decades been a trade-off to capitalist growth.



Figure 15. KWBACB's role in circle of various ecological changes affecting Sacramento-San Joaquin Delta. Diagram produced by Gregory Anderson (2018) based on Lund (2007) and Restore the Delta (2013).

Getting a Fix

The compensatory relationship between the KWBACB and the Sacramento-San Joaquin Delta resembles a construct Harvey (2020), Ekers and Prudham (2018, 2015), and Guthman (2015) have referred to as a 'socioecological fix'. That is, it acts as a device intend to help resolve or counterbalance what has become a crisis of capitalism, wherein transformations of the Delta's landscapes and ecology affect how Delta-dwelling human and nonhuman organisms relate. Reactionary transformations of landscapes and socio-natural relationships at, and peripheral to, the KWBACB are then meant to be part of facilitating this fix.

Environmental group stakeholders I interviewed expressed skepticism as to whether the KWBACB's conservation activities compensate sufficiently for ecological stress in the Delta so as

to provide a meaningful counterbalance (Interviews: Restore the Delta, 2018; Save the Delta-Sacramento, 2018; Center for Biological Diversity, 2018). One such interviewee stated:

> We think they do some good conservation work, yes. But we question the sincerity of that work when they could achieve a more powerful net effect if they just reduced their strain on water from the Delta in the first place. Our objection goes beyond this: they don't conserve Delta wildlife **at** the Delta; instead, they relocate it so they can conserve that wildlife on their site, on their terms, where they can control the narrative about it so that society—and the government—will feel placated enough not to expect more to be done.

In suggesting the KWBACB's offsets of the Delta are meant to have a placating effect, the interviewee echoes a critical argument by Swyngedouw (2010, p. 222) that environmental actions are sometimes undertaken with a view toward "producing a socio-ecological fix to make sure nothing really changes". In this perspective, the fix promotes a false social reassurance that the ecological concern is being addressed and thus no further alterations to the harmful behaviors need be undertaken.

However, in this case study, I also found the fix to be premised on the concept of "ecological modernization", wherein the KWBACB's compensatory conservation serves to rationalize allowing capitalist development activities to continue so as to enable "the possibility of overcoming the environmental crisis without halting the path of modernization" (Mol et al., 2014, p. 15). For example, as was evidenced in Chapter Four, the state actively seeks and encourages ambitious capitalist development—knowing this may entail some environmental compromises—and so promotes conservation banking to offset them.

Alternatively, for the state and some other stakeholders the water diversion and transport infrastructure in Figures 13 and 14 might also be interpreted less cynically as functioning in a capacity Swyngedouw (2013, 2015) calls a 'hydrosocial fix'. Construed in this way, the term 'fix' would imply the potential for an ecologically and socially progressive

configuration of the diversion infrastructure originating from the Delta, as a pragmatic means of moving water southward where it is most critically needed (Castree and Christophers, 2015).

The ecological complexity of water diversion on a mass scale is bound to inspire competing interpretations regarding the 'fix' value the KWBACB provides to the state and to in this regard. Interpretation of the value derived by the KWBACB's owners may be similarly complex or controversial, but I analyze this next to consider what their value diversification strategies reveal about what motivating benefits are possible for conservation bankers in California.

5.2 Deriving Diversified Value

Dempsey and Suarez (2016) have argued that although environmental market concepts have received significant literature attention over the last two decades, the actual amount of uptake and capital investment into market-based conservation models, particularly conservation banking, have so far shown them to be "underperforming" and only "marginally profitable at best" (p. 653). They view this finding to be in stark contrast with the way the sector is "commonly portrayed not only in mainstream environmental conservation literature, but also within some critical geographical scholarship as offering ready opportunities for capitalists to convert nature into credits" (p. 654) and then credits into profits. As discussed in my Chapter Two literature review, the existing writings reflecting both of these two disparate perspectives presume that conservation banking profits or value are derived solely from the sale of conservation credits; however, I offer an alternative perspective. I argue that in California, conservation bank profits and other value derived therefrom reflect the diversified accumulation strategies of each bank's owners.

Across all of the KWBACB's compensation responsibilities, it sells each of its credits for $15,375 per credit-acre, regardless of which species or habitat type is represented by the credit being purchased (Interview - Bank Manager, 2018; HCPB bank credit sales list, 2018). Of the 3,267 credits for which it was approved, the KWBACB had sold 1,114 as of 2018 resulting in a total gross income from credit sales of USD $17.13 million since establishment of the bank, or $774,684 per year on average since 1997 (CDFW credit sale records, 2018). In the bank's most recent annual report (to the CDFW), it indicated its annual operating cost to be USD $490,114[34] (KWBACB Annual Report, FY 2018). The bank may thus be estimated to have earned a net annual income of USD $284,570 from credit sales in FY 2018 after operating costs. The KWBACB co-owner's comments (2018) offer some insight on the relative value of that income:

> We're not out to make big money from selling these conservation credits. Those sales reimburse our long-term expenses to manage the conservation bank, and I think that's fair. We got into conservation banking unexpectedly, and there was a learning curve. But it's been worth it and I've found conservation knowledge to be valuable for running my primary business; after all, environmental responsibility is something we want our corporation [the Wonderful Company] to be known for.

Since conservation banks are legally obligated to continue sustaining their conservation management in perpetuity, the KWBACB's ongoing operating costs can be expected to remain at least the same or more likely to rise with annual inflation. Conversely, when the KWBACB's remaining credits are sold out there will be no further income from credit sales, since the conservation credits can only be sold only *once*. Yet the conservation management expenses will continue in perpetuity; eventually, these expenses will cumulatively total more than was earned from the finite credit sales. Such economics do not correspond with existing literatures' portrayal of conservation banking as reliant on conservation credit sales as the sole method of profit and capital accumulation.

[34] Audited financials by PwC.

However, the owners of the KWBACB derive other forms of value from owning the conservation bank that are each at least as, if not more, rewarding than credit sales; these include not only other types of economic value such as facilitated by the privatized, banked water which can be used for agricultural irrigation, but also cultural value and social value as well. With reinvestment of these derived values, the owners are able to accumulate and multiply corresponding economic, cultural and social capital (Marx, 1867)—thus benefiting from capital in motion via primary[35], secondary[36] and tertiary[37] circuits of capital. Over time, the KWBACB owners have reached the self-perpetuating point of accumulated advantage or what Merton (1968) called 'the Matthew effect'.[38] Pierre Bourdieu (1986, p. 241) explained this cumulative advantage thus:

> Capital takes time to accumulate and has a potential capacity to produce profits and to reproduce itself in identical or expanded form. It contains a tendency to persist in its being, and is a force inscribed in the objectivity of things so that everything is not equally possible or impossible.

I first summarize briefly below my analysis of how the KWBACB owners derive the three types of value from owning the conservation bank; I then explore more deeply how the capital accumulations reproduce themselves and each other with a momentum and inter-exchangeability:

[35] For example, the bank owners invest in agricultural labor to produce fruit/nut commodities and, as I argue in Chapter Seven, nonhuman labor to produce marketing commodities (Marx, 1867).
[36] For example, the bank owners have invested in built environments of the water banking infrastructure, and enhancing habitats to conserve a greater variety of species (Harvey, 2002).
[37] For example, the bank owners made social investments in building a free health clinic and park in Lost Hills which they publicized on social media as being for the welfare of their agricultural employees (Harvey, 2002).
[38] The rich get richer due to accumulation via reinvestment of profits or assets. The name comes from the parable of the talents in the biblical Gospel of Matthew.

1. The KWBACB's owners derive *economic value* from having gained control of state-subsidized water, which they have been able to use to irrigate their agriculture crops and build an agribusiness dynasty that earns them billions in accumulated *economic capital*.

2. The KWBACB owners derive *cultural value* from learning the conservation management activities done at their bank, which the co-owner stated had been completely new to them. Gradually, they have learned environmental conservation-specific or 'green' terminology, green behavior, and skills for framing and presenting topics (e.g. branding) publicly in a green way, thus accumulating this knowledge as *cultural capital* that provides them mobility to attain a higher status and environmentally responsible reputation.

3. The KWBACB owners derive *social value* indirectly from the conservation bank through converting the economic and cultural capital it provides into access to elite social networks—in so doing accumulating social capital. However, the bank also yields social capital directly by virtue of its central role in certain stakeholder relationship networks, comprising for example San Joaquin Valley species-specific conservation enthusiast groups, or the Kern County agribusiness sector farmers who rely on the KWBACB owners' socio-political leverage to lobby for increased allotments of Aqueduct water.

Economic Value → Economic Capital

If not for the conservation bank, the majority owners of the Kern Water Bank Authority would not have gained access to the 1.2 trillion liters of water the bank receives primarily via the Aqueduct each year. As a result of the 'water bank – conservation bank swap', they derive economic value by using 440 billion liters of that water annually to irrigate their 125,000 acres of

pistachios, almonds, pomegranates, citrus and other crops (Bacher, 2015). In figure 16, I illustrate how much water this equals in comparison to the amount of water used annually by all Los Angeles homes. The remaining water goes to various other Kern County agricultural stakeholders and southern California cities/counties and is variable by year (such as due to rainfall fluctuations).

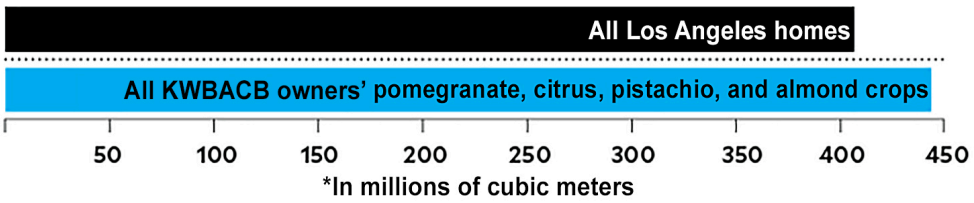


Figure 16. Amount of annual Kern Water Bank water that goes to supply Los Angeles homes, versus the agriculture crops of the KWBACB owners. Data sourced from California Water Resources Control Board, the Pacific Institute, and University of California-Davis (2019).

Since Kern County receives only six inches of rainfall per year (National Weather Service, 2019); the banked water is thus a pivotal advantage over agribusiness competitors in California, as the KWBAC co-owner explained:

> We do get criticized sometimes by organizations claiming unfair use of too much water. But I've been a businessman for 50 years, and competitive advantages are always part of profiting in business. Water is one of our competitive advantages. Sure, when we made an agreement with Sacramento [Capital of California] the water changed everything financially for our farming business. The dried-up land I had bought inexpensively years before—water made it more valuable. But it was a fair deal.

Aided by the water, the KWBACB owners' market share of the global pistachio and almonds sales industry has grown to now exceed 70 percent (*European Food*, 2019). Remarkably, the strongest period of this market growth occurred during the years 2006 - 2014 when California

was suffering from a historic state-wide drought (Sorvino, 2015). In 2017 alone, the privately-held Wonderful Company grossed USD $4.8 billion in income for the KWBACB's owners (Wonderful Company Annual Report, 2018). The economic value they derive from owning the KWBACB as a multi-pronged path to agribusiness success has helped elevate the bank owners' net worth to USD $9 billion as of 2020, up from $5.6 billion in 2019 (Forbes Magazine, 2020; Kroll and Dolan, 2019).

Cultural Value → Cultural Capital

The KWBACB owners derive and accumulate cultural capital in the form of knowledge about employing what Neil Smith (2007) calls "nature as an accumulation strategy", on the one hand through species conservation skills and on the other hand through agriculture skills, but both via capitalist production of nature. Although Marx wrote of capitalists' 'domination of nature', the KWBACB co-owner (Interview SR, 2018) interestingly characterized this learning as a transferable skill of "collaboration with nature":

> The conservation bank has taught us about collaborating with nature to produce maximum results, to work with nature's own default tendencies as a way of optimizing the 'yield', whether it be how many different kinds of birds can be supported on one acre of the bank, or how many almond trees or pistachios can fit per one acre of land without causing soil degradation. We are originally city people; we had to learn from scratch how to collaborate with nature—conservation helped teach us.

This interviewee's choice of language suggests that engagement in the conservation bank's responsibilities has taught him how to incorporate the relevant linguistic cultural capital to (re)produce knowledge narratives that align their agribusiness publicly with these pro-conservation topics. As the owners have accumulated and perfected these skills as cultural capital, their constructing and presenting rather greenwashed narratives about themselves and

their businesses helped them elevate their social and professional acceptance. An interview comment from the KWBACB Bank Manager (2018) illustrates how they learned over time to control the narrative:

> In earlier years, the bank was 100% closed to the public and the communication strategy was essentially to share zero information. It was a defensive strategy, a result of having been the subject of criticisms. They [the bank owners] gradually learned their opacity only incited more speculation, so we developed messaging about the conservation we do here, guided visitor tours, commissioned photo essays. It doesn't stop all criticism they get about the water, but helps counterbalance and justify it.

The Bank Manager's comments above suggest at least some of the KWBACB owners' messaging strategies are aimed at publicly legitimizing their power to control and use the water. The relationship between cultural capital - knowledge and power has indeed been characterized as one of reciprocal legitimization (Escobar, 1998; Foucault, 1980; Robbins, 2006; Weiler, 2011). That is, power in politics or business can be built through accumulation and application of cultural capital - knowledge, while the powerful can then further (re)produce knowledge (as information to be publicized) and tailor it strategically according to their desired legitimization effects.

Through analysis of my on-site fieldwork observations, and comparison of current vs. past media, I found that the KWBACB's owners have increasingly learned to highlight their associations with the bank's conservation activities, while downplaying their associations with the water. For example, the bank owners' Wonderful Company now includes on its Instagram account periodic posts referencing activities at the KWBACB as a vague association with being 'green' [see Figure 17]. Similarly, during a guided walking tour I joined of the KWBACB attended by members of the Kern Audubon Society and the Santa Barbara Audubon Society, the guide mentioned the bank owners' Wonderful Company by name multiple times in the course of her presentation even though its material relevance to the bank's nature conservation activities was vague. An apparently confused but impressed tour participant aged 9 years commented:



Figure 17. 'Green' Instagram page (2019) of the Bank owners' Wonderful Company. Photos from guided tours at the KWBACB are shown in the second row from the top. Note that every photo features the color green.

> I agree with you saying the 'orange' company is wonderful, because they must be wonderful for letting all these birds live here where they can eat all the oranges. But I think you should also say the birds are wonderful too, because we came to see birds.

In contrast, an adult ornithologist participant's question about where the water on which birds were gathered comes from was deflected by a vaguely off-point response that the water "belongs to a water company".

The effectiveness of such a 'vaguely green' communication style has been validated by Schmuck et al. (2018), who found by drawing on an affect-reason-involvement model that consumers responded positively to organizations who presented themselves as green through making vague claims about their environmental practices, or who made vague associations between their organization and generic but pleasant nature-evoking activities or images. In contrast, Schmuck found consumers were more likely to respond negatively, or with a suspicion of greenwashing, toward organizations who presented themselves as green by making specific, but potentially false, claims. Delmas and Burbane (2014) found that social media platforms like Instagram, being until recently minimally regulated, have been popular places for such 'green by association' behavior because the format favors idealized imagery and textual brevity that eschews detail. The KWBACB owners' employment of such knowledge demonstrates accumulation of cultural capital over time.

Social Value → Social Capital

As explored in Chapter Two's literature review, a number of authors have acknowledged that variations exist in how 'social capital' is defined (Dolfsma and Dannreuther 2003; Adler and Kwon 2002; Foley and Edwards 1997). Consequently, Robison et al. (2002) have proposed that the choice of definition adopted by any researcher should be guided by the aims of their investigation. Befitting my aim of understanding inequalities arising from and within conservation banking, I work primarily with the definition offered by Bourdieu (1983, p. 184), who viewed social capital as being "the aggregate of the actual or potential resources which are linked to

possession of a durable network of relationships of mutual acquaintance and recognition." According to Bourdieu, this relationship network functions as a mechanism used by the wealthy and powerful for reproduction of inequality: the more social capital one accumulates, the more readily possible it is to exponentially generate further social value and capital exclusively for one's self and one's descendants.

The KWBACB owners derive social value from the conservation bank in two key ways: Directly, their ownership of the bank puts them at a somewhat central axis point between California conservation and water policy whereby networks of different stakeholders coalesce around them. For example, the Audubon Society of Kern County stated that they look to the KWBACB as a main conservation center for bird species displaced from the Sacramento-San Joachim Delta (Interviews Kern Audubon Society, 2018). The Society members often conduct field trips to the bank, engage with the staff and the owners, and post social media that advocate for the KWBACB's conservation work; two Audubon members described having made presentations at events at the KWBACB owners' Beverly Hills home located 110 miles away (Kern Audubon Society Interviews, 2018).

Indirectly, the owners of the KWBACB derive social value through conversion of economic capital accumulated via the 'water bank – conservation bank swap' into wealth-oriented forms of prestige and social visibility—with these then being converted to social capital. As Bourdieu (1986, p. 243) states, ''the real logic of the functioning of capital is the conversion from one type to another.'' I found that such conversion may occur in sequential interim stages and intermediary forms; for example, an interim visibility stage of the KWBACB owners' economic capital was necessary before it could be converted (e.g. via increased social access) to some of the social capital accumulation from which they now benefit.

To illustrate, the owners' economic capital alone might be sufficient to enable their access to state politicians in order to lobby regarding State Water Project allotments, as California politicians routinely meet with their largest campaign donors (Kalla and Broockman, 2016; Schuler, 2002; Harkinson, 2016). However, when the KWBACB owners have hosted political fundraising events at their Beverly Hills home for California's pro-water diversion governors and senator, the bank owners' economic visibility was the power that enabled them to attract attendance by the wealthiest capitalists and A-list Hollywood celebrity donors (Williams, 2009).

Balaam and Dillman (2018, p.100) argue that such power is usually only possible for "economic notables" having the visible wealth that publicly reinforces the advantages of such wealth. Where affluence is possible on a large scale enabling it to become highly visible and socially valued, such as in California's capitalistic political economy, that visibility can yield influence that is tradeable as a commodity in social or political marketplaces (Gilens, 2012). To wit, the KWBACB owners have made their economic capital conspicuous, for example by donating eponymous public buildings including a hospital to UCLA, an eponymous museum to the County of Los Angeles, and an eponymous environmental institute to CalTech among numerous others (LA Times, 2010; Chronicle of Philanthropy, 2018; Caltech, 2019). These acts of what Drennan (2011, p. 45; 2016, p. 1323) and Anderson (2009, p. 273) call "conspicuous philanthropy" receive significant public recognition that helps achieve their conversion of economic capital into social capital in informal capital 'markets'.

Having examined how the KWBACB owners' benefit from deriving diverse forms of value, I turn in the next and final section to examine how their fellow stakeholders experience a rather different benefit trajectory.

5.3 Neoliberal Natures' Impact on Peripheral Stakeholders

Throughout Sections 5.1, 5.2, and 5.3, the components discussed such as market-based conservation, privatization of water and of conservation, and emphasis on capital accumulation are illustrative of California's neoliberalism (Bakker, 2009). Such neoliberal agenda dynamics are often based upon the optimistic premise that processes entrusted to market forces and market governance can support strong economic growth while simultaneously achieving *socially optimal* outcomes (Cáceres, 2015; Swyngedouw, 2005). However, as I turn now to examining how peripheral stakeholders are impacted by the 'water bank – conservation bank swap', the KWBACB's operations, and its owners' capital accumulation, the social outcomes do not appear equally optimal for all. Rather, it becomes apparent that as the KWBACB's owners derive increasing amounts of benefit, some other stakeholders struggle in correspondingly inverse proportion.

This trajectory reinforces a critical argument by Roberts (2008) suggesting that neoliberal capitalism and its market-based premises are merely a more sophisticated-sounding or aesthetically packaged continuation of processes authors such as David Harvey (2005), Karl Marx (1867), and Adam Smith (1776) have referred to as 'primitive accumulation.' While each of these authors conceptualizes primitive accumulation somewhat differently,[39] they share an idea that enclosure and privatization of land and its resources by one group leaves other stakeholder groups at a comparative disadvantage.

Through my fieldwork, I observed such an inverse dynamic to be correlated with the KWBACB owners' enclosure of the KWBACB land, and privatization of its associated water. First,

[39] For example, Smith saw it as fairly rewarding more diligent workers, whereas Marx viewed it as unfairly exploitive of workers.

some stakeholder groups face resultant unequal access to water; these include populations for which the now privatized land and water had in the past been more freely available. Second, I also came to recognize the dispossession of some other stakeholder groups' collective rights, and thus risks of social injustice; among these is the immigrant agricultural worker population of Kern County, many of which are employed by the owners of the KWBACB.

Water Enclosure

Bakker (2000; 2003) argues that to achieve state-sanctioned privatization of natural resources such as water, capitalists often lobby stories of impending scarcity of those resources, and then paint themselves as offering the solution. The Executive Director of California Water Impact Network described in Section 5.2 that precisely this was originally done to help gain privatized control of the Kern Water Bank via the *Monterey Agreement*. Yet, enclosure and privatization of a water resource can be a cause of its scarcity, rather than a solution to it (Bakker, 2000). As I examine next, for some peripheral stakeholders of the KWBACB this has been a consequence of enclosure of the Kern Water Bank (Aerts et al., 2008). These include, for example, southern California residents who rely on water diverted from northern California, and Kern and Kings County farmers who compete with the KWBACB owners in the agribusiness sector.

Southern California Residents Pay Higher Rates for Water

Because an increasing amount of the state's water is diverted from the California Aqueduct to the Kern Water Bank[40], less state water continues onward further south via the Aqueduct to Southern California residents (Ashoori et al., 2015). This makes water more precious

[40] Between 1998 and 2014 the annual water allocation to Kern Water Bank more than doubled (Keats and Tu, 2015).

and expensive for all of Southern California's 20 million residents, leading to social conflicts between wealthy communities versus poorer communities over the relative water quantities each can use (Hackman, 2015). The City of Los Angeles imports 90% of its water; reductions to Aqueduct water quantities caused Los Angeles water rates to increase by 71 percent from 2010 to 2017 (Ashoori et al., 2015; Hiltzik, 2017), which disproportionally affects poorer stakeholders because the water is so expensive relative to their income.

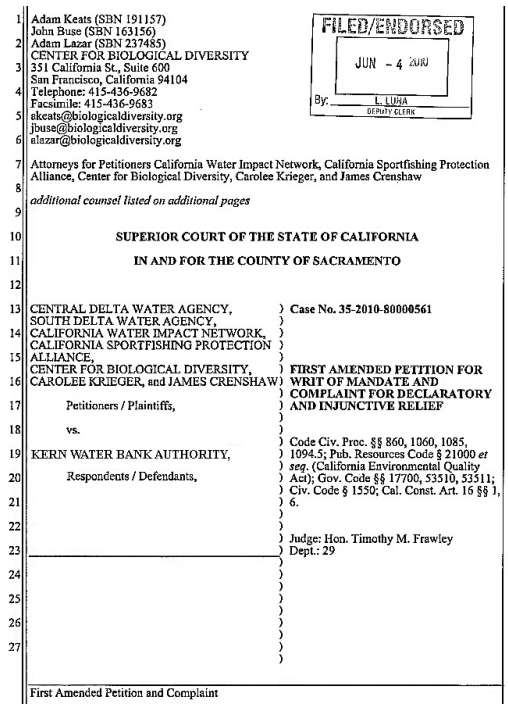
San Joaquin Valley Agribusiness Peers Thirst

Past agribusiness peers in the Sacramento-San Joaquin Delta folded due to the effects of increased salinity caused by water diversion (Medellín-Azuara et al., 2014); agribusiness peers more local to the KWBACB have been increasingly unable to compete with the bank owners' agriculture productivity, due mostly to unequal access to irrigation water (Buscher-Dang, 2017; Interview CK, 2018). In fact, some of the agriculture land now owned by the KWBACB owners was gradually acquired from adjacent farmers who went out of business (Kern and Kings County Clerk property records, 2018; Interviews, 2018). Those who have remained viable sometimes purchase water from the Kern Water Bank Authority, which in drought years sells at a profit the water it banks and encloses (Hanak and Stryjewski, 2012; Howitt and Hanak, 2005; Environmental Working Group, 2005).



Figure 18. The KWBACB owners' Wonderful Company crop land is on the left. On the right, competing farmers' drier crop land, with the California Aqueduct flowing directly between but inaccessible to the competitor. Photo by Gregory Anderson, 2018, using DJ1 Mavic drone.

Taugher (2008) notes that public recriminations citing unfair dissimilitude sometimes follow the above transactions, even turning into lawsuits. In research on the effects of enclosure of water resources, Strang (2016, 2013b, 2012, 2009) found that it almost always leads to inequitable outcomes, and sometimes to such dissent. Through searching county courthouse records, I located eight lawsuits filed by various plaintiffs since 2006 [Figure 19] in which the Kern Water Bank Authority has been named a defendant, with allegations that the 1994 privatization of the Kern Water Bank was unconstitutional (Sacramento County Clerk Office, 2006-2018; Kern County Clerk Office, 2018). The in-house attorney for the Center for Biological Diversity (2018) explained:



Adam Keats (SBN 191157)
John Buse (SBN 163156)
Adam Lazar (SBN 237485)
CENTER FOR BIOLOGICAL DIVERSITY
351 California St., Suite 600
San Francisco, California 94104
Telephone: 415-436-9682
Facsimile: 415-436-9683
akeats@biologicaldiversity.org
jbuse@biologicaldiversity.org
alazar@biologicaldiversity.org

FILED/ENDORSED
JUN - 4 2010
By: L. LUNA DEPUTY CLERK

Attorneys for Petitioners California Water Impact Network, California Sportfishing Protection Alliance, Center for Biological Diversity, Carolee Krieger, and James Crenshaw

additional counsel listed on additional pages

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF SACRAMENTO

CENTRAL DELTA WATER AGENCY, SOUTH DELTA WATER AGENCY, CALIFORNIA WATER IMPACT NETWORK, CALIFORNIA SPORTFISHING PROTECTION ALLIANCE, CENTER FOR BIOLOGICAL DIVERSITY, CAROLEE KRIEGER, and JAMES CRENSHAW)

Petitioners / Plaintiffs,

vs.

KERN WATER BANK AUTHORITY,

Respondents / Defendants,

Case No. 35-2010-80000561

FIRST AMENDED PETITION FOR WRIT OF MANDATE AND COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

Code Civ. Proc. §§ 860, 1060, 1085, 1094.5; Pub. Resources Code § 21000 *et seq.* (California Environmental Quality Act); Gov. Code §§ 17700, 53510, 53511; Civ. Code § 1550; Cal. Const. Art. 16 §§ 1, 6.

Judge: Hon. Timothy M. Frawley
Dept.: 29

First Amended Petition and Complaint

Figure 19. Cover page of a lawsuit filed against the Kern Water Bank Authority.

> We [the plaintiffs] sue as a united voice so that it's possible to take on such a wealthy, well-connected, and formidable opponent. Our main lawsuit has requested that the Court invalidate and reverse the 1994 [Monterey Agreement] transfer of the Kern Water Bank from public to private ownership based on the fact that the transfer was not legal under the U.S. Constitution. The water belongs to the citizens of California because it is a public good under the public trust doctrine.

Local Lower-Income Groups Face Marginalization

The capitalist owners of the KWBACB believe the state's neoliberal free market approach gives everyone a fair chance, as the co-owner stated:

> Farming, and yes, the water, diversifying into new produce, these have been lucrative for us; but Wonderful [Co.] also gainfully employs 9,000 people. I'd say they're better off than if we had let the Valley continue to become a dust bowl like when we first bought the land. The great thing about California is, everybody here has equal opportunity to achieve if they work hard; it's a meritocracy.

Members of local low-income communities in Kern and Kings County—many of whom are undocumented immigrant agricultural workers—feel disadvantaged or marginalized by shrinking employment options (Interviews-Lost Hills, 2018). Up until the 1990s when Delta water diversion increased, many would have worked for agribusiness in the Delta (Boilard et al., 2015). Now, with the KWBACB owners' agribusiness thriving and expanding while other farms struggle or consolidate, there have become fewer employment alternatives for agricultural workers other than to work for the Wonderful Company or at the nearby Chevron oil field. Lost Hills resident Mario*, age 18, commented:

> Both my padre and I work at the Wonderful almond orchard and that's ok because almond trees need work all year instead of just a season; they need us there steady; it's $13.25 an hour. Some of the other farms around here hire just for part-season; they have less steady work or can't afford to hire for year-round anymore. My madre works in the Wonderful sorting warehouse, making $12 an hour. Everyone I know works at Wonderful (Interview, 2018).

Indeed, I found during my fieldwork in the town of Lost Hills—which is adjacent to the KWBACB—that most of the local population of 2,586 (U.S. Census, 2018) is comprised of agricultural workers employed to tend Wonderful Company crops; some also maintain habitat conditions of the conservation bank itself (Lost Hills Interviews, 2018). And yet, despite being proximally close to the KWBACB land, the bank seems to function as a virtual exclosure that keeps them socially, economically and politically segregated from the economic mobility and influence that has radiated from the bank. Their quality of life is austere compared to that of the KWBACB owners. For example, in 2014, the most recent year for which there are figures

available, average annual earnings for Kern County agricultural workers were USD $16,500 (Martin et al., 2016). This amount was equal to the U.S. poverty threshold level for individuals in 2014, and below the poverty threshold level of USD $24,200 for a family of four (U.S. Government Census, 2010-2020).



Figure 20. Interviewee photo by Gregory Anderson in Lost Hills, 2018. Photo used with subjects' consent.

Lost Hills residents' homes are mostly caravan-type trailers or aging pre-fabricated metal homes and, despite their small size, I learned most are inhabited by families of four or more members [See Figure 20]. Through interviews I learned Lost Hills residents do not have consistent access to clean, safe water; the running water there is orange-brown and low-volume. Some drive to nearby Bakersfield to purchase drinking water from a water vending machine (Interviews, Lost Hills, 2018). Residential water supplies in the entire region have been chronically troubled by unsafe water quality and shortages; in 1993 Charbonneau and Kondolf found the local agribusiness to be the largest contributor to nonpoint source pollution of the ground water supplies there,[41] and Arbelaez, et al., (2015) found water quality has declined further since due to nearby oil field pollution.

In Lost Hills, inadequate access to clean residential water is ironic given that the California Aqueduct—inaccessibly enclosed by fencing—runs tantalizingly and directly through Lost Hills [see Figure 21] and necessitates the town's children to cross over the Aqueduct each day to attend school. Fence-enclosed water canals at the KWBACB transporting water from the Aqueduct are also visible nearby.

[41] Nonpoint source pollution can include fertilizers, herbicides and insecticides from agricultural land.



Figure 21. Photo of Lost Hills, California by Gregory Anderson, using DJ1 Mavic drone.



Figure 22. Water transport canal at the KWBACB that moves Aqueduct water to the bank aquifer, and then banked water to irrigate Wonderful Company pistachio and almond tree orchards. Photo, Gregory Anderson, 2018.

The immigrant agricultural workers face a number of health and safety hazards in the workplace related to the use of machinery (Interviews, 2018). Additional Kern County agricultural worker health hazards include pesticide exposure, and frequent airborne dusts (Liebman and Augustave, 2010). From citrus picker Maria* I learned the County's climate creates not only a hazard, but also a sort of workplace stratification:

> Kern county has hot weather and the sun shines strongly every day; we spend ten hours per day working under the sun and in dust, and people get ill of agotamiento por calor [heat exhaustion]. The foreman works under a shade all day; we have our own shade during breaks too, plus water, but breaks are only 10 minutes, and 30 for lunch (Interview, 2018).

Jorge* told me that some male fieldworkers work seven days per week due to pistachio and almond trees' need for daily irrigation during hot months, leading to exhaustion and injuries from accidents (Interviews-Lost Hills, 2018).

Studies confirm what these Lost Hills interviewees described. Health conditions for Kern County agricultural workers have been documented to be the worst of any labor group in California or the broader United States (Villarejo, 2010). Mills et al. (2006) found that the group has an average death rate that is five times higher than workers in other California industries. In a 2008 health study, 4.6 percent had experienced a major farm workplace injury within the prior 12 months (Villarejo, 2008). Larson et al. (2017) found that agricultural pesticide exposure increased adverse birth outcomes by five to nine percent among Kern County agricultural workers.

Despite such health risks, Arcury and Quandt (2007) found that agricultural workers in Kern County had little access to affordable health care, and frequently avoided contact with health care workers to reduce risk of discovery regarding their undocumented immigration

status. To their credit, the owners of the KWBACB established a small free health clinic in Lost Hills for the use of their bank and agriculture employees (Interview-KWBACB co-owner, 2018). However, agriculture worker and half-time KWBACB worker Anthony* expressed hesitance about the clinic:

> Well, they told me the clinic requires patients coming in for treatment of work injuries to first sign a release document saying we won't file a lawsuit against the Wonderful Company or file a state Workers' Compensation claim. I don't want to sue my bosses. But signing something to give up rights? Why? I'm already invisible. I already know I don't have rights.

Compared to their KWBACB employers, immigrant agricultural workers in Kern County like Anthony do seem to have little power to influence their circumstances. I found that they are excluded from protection by the three U.S. federal laws that cover most other types of workers: the *National Labor Relations Act*, guaranteeing the right to join a union and bargain collectively (Costa, 2021); the *Fair Labor Standards Act*, governing minimum wage and child labor practices; and the *Occupational Safety and Health Act*, governing standards of health and safety in the workplace (Rosner and Markowitz, 2020). The immigrant farm workers are also not eligible under California state laws for unemployment insurance (Smith, 2020).

As a result, the agricultural workers I interviewed in Lost Hills like Anna* expressed a fear of questioning any employment practices to which they might be subjected: "If I complain or ask questions about my rights, they could just replace me with somebody easier to get along with, or they might report me to ICE [U.S. Immigration and Customs Enforcement]" (Interview-Lost Hills, 2018). These workers also displayed a lack of basic knowledge about labor laws, and did not understand which laws might apply to them, as Jorge's* comment demonstrates: "I don't know laws about my job, and I'm not an American citizen so the only laws that affect me are the ones

that are bad for me; anyway, lawyers are very expensive and I am poor" (Interview-Lost Hills, 2018).

Although unbeknownst to Jorge, there has been some state-level effort via California's *Agricultural Labor Relations Act* to address such workers' lack of power to bargain, or lobby, collectively (Griffith, 2016). Some of this has come about from demonstrations of worker agency; the workers have sometimes engaged in strategically-timed walk-offs, leaving owners facing short harvest windows to scramble (Lost Hills Interviews, 2018). However, Guthman (2017) has noted that gains from such actions have been exaggerated or idealized by some authors, and my fieldwork interviews (2018) revealed that agriculture workers such as pickers are often in competition with each other—to demonstrate their relative productivity—rather than keen to join collective forces. In fact, Guthman found that some farm owners have incentivized such competitive individualism thorough offering peer-comparative performance bonuses.

In bringing forth California's *Agricultural Labor Relations Act,* the neoliberal state may actually be acting to assist Kern County agribusinesses fill their labor needs; most American citizens will not do low-paid agricultural jobs (Thompson, 2011). The KWBACB's co-owner even seemed to suggest the immigrant agriculture workers serve a social labor role: "The work our employees do helps feed this country." McCauley (2017) has argued that the state of California has for decades intentionally nurtured the existence of a continuous pool of undocumented immigrant agricultural workers, most recently by establishing its 'sanctuary state'[42] status and enacting the *California Values Act,* which prohibits deportation of undocumented immigrants. Mitchell (2018) similarly argues that, below the surface appearance, such laws are not truly

[42] A U.S. 'sanctuary state' allows undocumented immigrants to live free from interference from immigration enforcement agencies.

intended to protect or empower undocumented immigrant farm workers, but rather to ensure a constant and unlimited cheap, powerless labor pool for California's agriculture industry.

If circumstances surrounding the Kern Water Bank Authority Conservation Bank appear to contribute to perpetuating some of the inequitable benefits or costs discussed above, it is nevertheless important to note that they also pre-dated the KWBACB and conservation banking by years and can be seen to have multiple socio-political causal factors. It is also important to recognize and consider the role of the state's actions in influencing those inequalities.

Conclusion

With this chapter, my purpose has been twofold. First, to the literature on market-based conservation I have contributed a new, more comprehensive recognition of the diversified value and benefit streams available to conservation bank owners in California, extending beyond the sale of credits. Analysis of what benefits and motivates conservation bankers, and what may be evaluated as successful outcomes for them and their banks, becomes more feasible when viewed with this broader focus. In drawing on a Bourdieusian understanding of the politics of value, I have argued that bank owners are able to derive value and accumulate capital that is not only economic, but may also be cultural and social as well. Consanguineous to this view, this case study has highlighted the significance of how and why a conservation bank comes to be established on a particular plot of land in the first place, and demonstrated that underlying political and economic motivations may be at least as relevant as any desires to conserve the autochthonous natures.

Second, I have shown that in a given conservation banking scenario, not all stakeholders are likely to benefit equally from the resultant environmental alterations even though they may

be deemed compensatory. In fact, the case study in this chapter revealed a pattern of inverse correlation wherein the more some stakeholders like those in Section 5.2 benefit, the less some other stakeholders like those in Section 5.3 benefit. While some political ecologists (e.g. Bryant and Bailey, 1997) might predict such unequal benefits to develop in response to any alterations to an environment, I have shown that both directly related as well as peripheral policies of the neoliberal, capitalist state have contributed just as much as the conservation bank activities to resulting inequalities.

This invites further, comparative research on conservation banking in other geopolitical contexts, which could build on the learnings here that conservation banking is more than just credits and the model has more than one rendition; any future evaluation of the conservation banking model itself should involve familiarization with its potential variations and range of influences.

CHAPTER SIX:

INDIGENOUS CONSERVATION BANKING: THE AGUA CALIENTE TRIBAL CONSERVATION BANK

Recent discourse in decolonial political ecology literature regarding indigenous Americans has often suggested that past colonial systems disrupted the relationship that existed between indigenous humans, their land and sense of place, and nature, by colonizing all. Some such discourse has also characterized capitalism as being a destructive force to the well-being of indigenous peoples (Saldanha, 2020; Horne, 2018; Leong, 2012). Jalata (2016, p.49; 2013, p.1; 2011, p.2) has even characterized euro-American capitalism as a form of "colonial terrorism" that has victimized indigenous Americans. However, in this chapter, I argue that for the Agua Caliente Band of Cahuilla Indians, neoliberal state policies that packaged privatized conservation with capitalist economic development schemes created an unusual type of decolonization mechanism in the form of the Agua Caliente Tribal Conservation Bank. It facilitates their derivation of diversified value, self-determination, and continuation of indigenous knowledge-based relationality with non-human nature via market-based conservation.

Both Harmon et al. (2011) and Barrington (1999) have recognized that the subject of indigenous Americans' engagement with capitalist economic life has received little attention by researchers, with Barrington stating that the "opportunities for study in this area still remain unlimited" (p. ix-x). Consequently, this chapter contributes to debates on indigenous decolonization and conservation politics an original perspective on the potential outcomes that are possible when neoliberal capitalism, conservation banking, and indigenous groups intersect. Additionally, although rich in material for political ecology analysis and discourse, this case has not received previous study.

As discussed more extensively in the literature review chapter, existing definitions of 'colonialism'—and especially 'decolonization'—are variable (Von Bismarck, 2012). It is therefore helpful at the outset to briefly recapitulate the principle definitions for each upon which I draw for this work. 'Colonialism' as defined by Veracini (2010) encapsulates the policies of a non-indigenous group that seeks dominant authority over an indigenous people or territory in the pursuit of economic interests. Indigenous 'decolonization' as defined by Smith (2013) and Elliot (2016) denotes the theoretical and political processes used to reframe narratives about indigenous community histories and the effects of colonial expansion and cultural assimilation, along with seeking to reposition knowledge about these within indigenous cultural or artistic practices.

Section 6.1 presents an overview of the geographic and historical context into which the Agua Caliente Tribal Conservation Bank has been situated, including the circumstances involving indigenous American conservation, tribal sovereignty, and neoliberal agenda politics through which the conservation bank came to exist via a 'casino—conservation bank swap'. Next, drawing upon indigenous decolonization literature and the politics of food sovereignty and art literature, Section 6.2 examines how diverse value derived through that 'casino—conservation bank swap' has interacted with the Agua Caliente Tribe's indigeneity to help manifest two classic decolonization markers. Section 6.3 analyzes the Tribe's assimilation of context-specific capitalist identity. Section 6.4 discusses the role of the conservation bank in social and racial dynamics between the Tribe and the non-indigenous population of Palm Springs.

The emphasis in this chapter is on land use and human geographies, with the nonhuman ecologies being focused upon in Chapter Seven.

6.1 Neoliberal Geographies: Coachella, Colonialism, Conservation, and Casinos

California's Coachella Valley is completely encircled by mountains averaging 6,000 feet (1,828 meters) in elevation, with a valley floor averaging at or below sea level (Yanez et al., 2020). The mountains thus act to buffer the Valley from adverse weather conditions throughout the year, resulting in a consistently warm, dry microclimate. The Valley receives less than 4.8 inches (122mm) of rain per year (Coachella Chamber of Commerce, 2017), but the mountains receive significant snowfall, leading to the Valley desert below displaying wetland areas, ponds, and the hot springs which gave the city of Palm Springs its name. All of these conditions and variations in elevation combine to explain why the Coachella Valley possesses broad biodiversity.



Figure 23. Valley floor of the Agua Caliente Tribal Conservation Bank. Photo by Gregory Anderson, 2018.

The existence and location of the ACTCB is neither arbitrary nor driven only by desires to conserve nonhuman nature. Rather, there exists a layered, ineluctable socio-political history behind this conservation bank and its entwinement with Palm Springs that serves as an invaluable resource

for understanding what a conservation bank really is and how it really works. Consequently, I first look back in time to briefly trace and distil the complicated but necessary history which brought Palm Springs and this conservation bank about.

At its core, the ACTCB land represents an intersection of indigeneity, (post) colonialism, and capitalism—past and present. The Agua Caliente Band of Cahuilla Indians first settled the Coachella Valley before 2,000 BCE (Love and Dahdul, 2002; Wilke, 1978).[43] They developed a culture and livelihood emphasis around harvesting the Valley's native edible plants (Sutton, 1998; Kroeber, 1908). This plant-based diet and lifestyle cemented the Tribe's relationship with the Coachella ecology and the Cahuilla's indigenous knowledge of managing its conservation, consistent with consensus that indigenous knowledge and identity usually originate through a group's early relationship with their land (Allen, 2002; Contassel, 2003; Coombes and Johnson, 2012; Kana'iaupuni and Malone, 2006; Sylvain, 2002; Weaver, 2001).

Through a series of 19th century U.S. federal laws that included the *Indian Removal Act* (1830) and the *Indian Appropriations Act* (1851) among others, the U.S. government seized a majority of the land across North America that had been home to indigenous peoples for centuries (Coombes and Johnson, 2012). Accordingly, the Agua Caliente Cahuilla were temporarily dispossessed from their Coachella land in the 1850s to make way for European settlers, but the Coachella Valley's hot desert terrain eventually proved too unfamiliar for the European settlers to farm (Akee and Jorgensen, 2014). In 1876, through an Executive Order signed by President Ulysses S. Grant, the Agua Caliente Reservation comprising 32,000 acres (12,790 ha) was created in the Coachella Valley as part of the *Dawes Act* land reallocation scheme.

[43] The Cahuilla's oral history traces its ancestral presence in the Coachella Valley back to 5,000 BCE; however, Love and Dahdul (2002) and Wilke (1978) find the first archaeological evidence of the Cahuilla's existence in the location dating to approximately 2,000 BCE.

This reunited the Cahuilla people with their homeland, but the reservation configuration transmogrified the Coachella Valley. To allow for capitalist expansion, the federal government mapped the Valley into a checkerboard grid of numbered squares [see Figure 24 below]—each being one square mile (640 acres) in size—and the Agua Caliente Tribe was allotted the even-numbered grid squares as its reservation land (Akee, 2009). This enabled allocation of odd-numbered grid parcels to the Southern Pacific Railroad as part of its east←→west pathway across the nation (Cook, 2014).

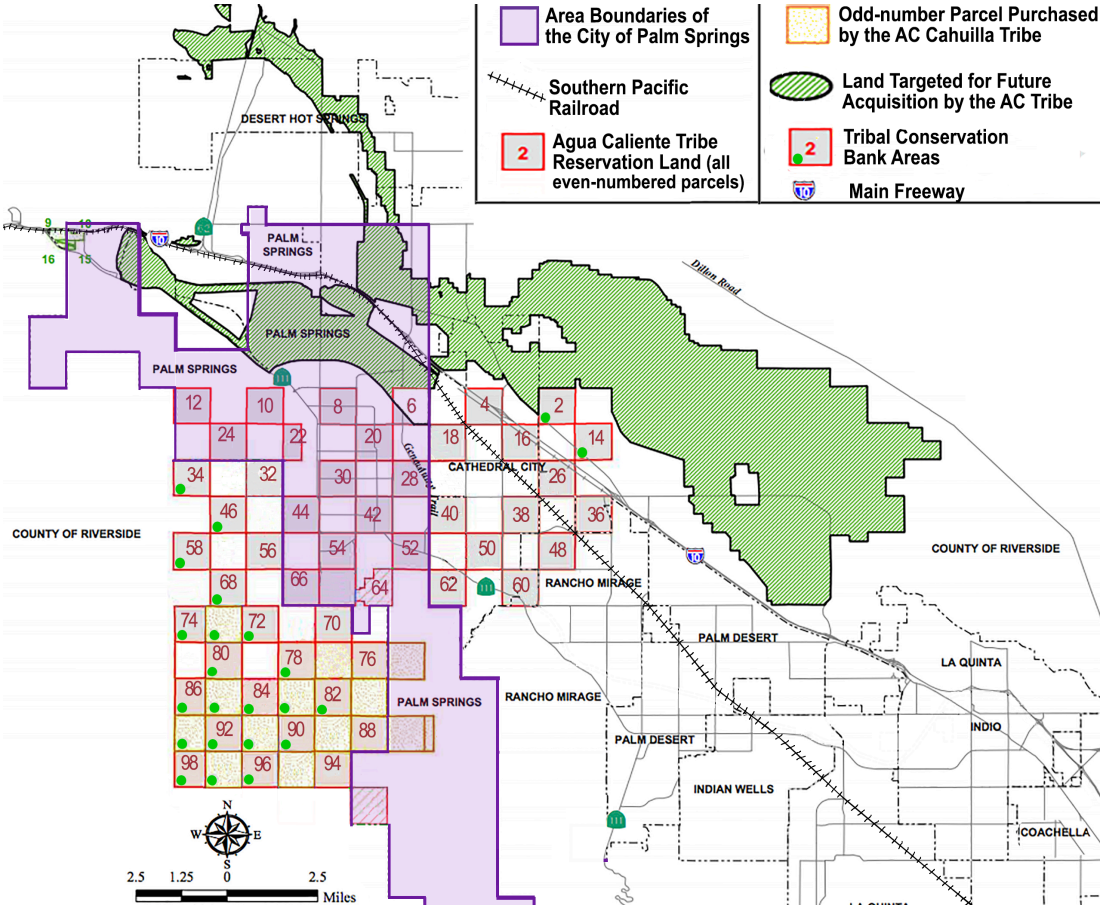


Figure 24. Coachella Valley map indicating checkerboard land reallocation pattern. Even-numbered parcels are initial reservation land; and yellow parcels in between have been subsequently acquired by Tribe. Note: Cathedral City, Rancho Mirage, and Palm Desert are extension neighbourhoods of "Palm Springs". Green-shaded areas indicate where the Tribe intends to acquire and expand further. Map produced by Gregory Anderson (2019) based on various Atlas maps and archived Riverside County Clerk land records.

Such fragmentation reduced the contiguousness of the Tribe's land, but it gave the Agua Caliente Tribe ownership of parcels central to what would develop into Palm Springs. The Southern Pacific Railroad's Coachella station stop made Palm Springs accessible to white, leisure-class tourists during the 1920s –1930s, who were attracted by the climate and hot springs (Ward, 2015). As Palm Springs land sold off as excess by the Southern Pacific Railroad became increasingly populated by hotels and Hollywood celebrities' luxury homes (Akee and Jorgensen, 2014), service sector enterprises proliferated and even spilled over onto Agua Caliente Reservation land. The Agua Caliente Tribe initiated federal lawsuits to argue for their right to collect land lease revenue from tenants on that reservation land (Lee Arenas v. United States, 1944). As a result, President Dwight D. Eisenhower signed the resulting 1959 *Equalization Law* that allowed *all* U.S. tribes to develop and earn profits from their reservation lands (Akee, 2009).

Betting correctly that more international celebrities and business moguls would come to Palm Springs if it had its own international airport (Brown, 2017), the Tribe sold[44] a 600-acre reservation land parcel to the City of Palm Springs for development into the Palm Springs International Airport (Greer, 2013). With international access via air, Palm Springs' demand for hotel accommodations accelerated. Palm Springs' Deputy City Clerk (Interview, 2018) described the effects for the Tribe:

> The Cahuilla own the land in the center of Palm Springs where any new hotels had to be located, so hotel entrepreneurs had to negotiate land lease terms with them to build successful hotels. For the first time in a long time they had a little income.

A similar scenario followed Palm Springs' housing boom: more than half of Palm Springs homeowners must lease the land their homes occupy from the Tribe, owning only the structures that sit atop that rented land (Akee, 2009). Up until 1977, the Tribe's reservation land located within

[44] With Bureau of Indian Affairs approval.

the city limits of Palm Springs was subject to the city's zoning laws (Reynolds, 1976). However, the Tribe again undertook a federal lawsuit resulting in the U.S. Department of Interior ruling that because the Tribe had sovereign status, so city zoning laws couldn't apply to Tribally-owned land (Bourgholtzer and Brinkley, 1977; *Agua Caliente Tribal Council vs. City of Palm Springs*, 1972). The Tribe's ability to then set and impose its own zoning and *environmental rules* for its land would later feature in the credit transactions of its conservation bank, the circumstances of whose establishment I turn to next.

Neoliberal Politics Makes Strange Bedfellows: Indigenous Conservation and Gambling

My analysis finds that a convergence of three neoliberal trends led to the unlikely pairing of conservation banking and casino gambling that would shape the Agua Caliente Tribe's socio-economic trajectory:

1. As Borrini et al. (2004), Critchley and Reij (1994), Krech (2005), and Lynch and Fell (2010) found, increased appreciation for indigenous conservation knowledge had led to efforts to incorporate it into national conservation agendas, especially among western nations; U.S. federal agencies notably pursued it in the early 2000s.

2. Realization then began growing that indigenous conservation knowledge alone had limited sustainability unless national conservation agendas also addressed indigenous peoples' need for economic resources to support managing that conservation (Borner and Wunder, 2010; Ens et al., 2016; Garnett et al., 2018; and Robinson, 2011).

3. The *Indian Gaming Regulatory Act* (1990), which had decreed that states have no jurisdiction to prohibit native American tribes from establishing gambling businesses, eventually

initiated a trend for the casino business being a preferred vehicle for tribal economic development; this too was promoted by the U.S. federal government in the early 2000s (National Indian Gaming Commission, 2003; 2007).

Through alignment of the above trends together, the opportunity for a 'conservation bank – casino swap' coalesced. Specifically, the 2004 establishment of the ACTCB was the result of an exchange negotiated between the Agua Caliente Band of Cahuilla Indians, and neoliberally-inclined agencies of the U.S. federal government including the Department of the Interior, the Bureau of Indian Affairs, the U.S. Fish and Wildlife Service (USFWS), and the National Indian Gaming Commission (Interview-USFWS, 2018). In return for a federal license to establish a casino-resort-spa complex on its tribal land, the Cahuilla agreed in return to create and manage a conservation bank on their reservation land to support species federally listed as 'endangered' (Dreier, 2007; Interviews, Tribe, 2018; Newton and Van Leuven, 2012; Przeklasa, 2011; Weeber, 2013).

My analysis further finds that three classically neoliberal actions may be identified in this 'conservation bank – casino swap':

1. The Department of the Interior, the Bureau of Indian Affairs, and the U.S. Fish and Wildlife Service were formally mandated by legislated policies detailed below to *privatize conservation* of federally endangered-listed species by transferring the responsibility for it from the *austerity*-prone federal government, to private sector Indian tribes such as the Agua Caliente Cahuilla.

2. The federal agencies specified the conservation to be implemented through the *market-based* approach of conservation banking as a way to facilitate income generation to underwrite the cost of the habitat conservation management.

3. By also granting the Tribe licensing for operation of a gambling casino in Palm Springs, the federal agencies carried out a type of selective *deregulation*, as casinos and gambling were otherwise illegal in the state of California and in most other U.S. states.

The two mandates of the federal government agencies which drove the initiation of this conservation bank – casino swap were *Joint Secretarial Order 3206* and the U.S. Fish and Wildlife Service's *Native American Policy* (Bureau of Indian Affairs, 2018). *Joint Secretarial Order 3206*, also illuminatingly titled the *American Indian Tribal Rights - Federal-Tribal Trust Responsibilities - Endangered Species Act,* laid out federal agencies' special obligations under the *Endangered Species Act* as relates to American Indian tribes and tribal land (USFWS, 1997). It required that the federal Department of the Interior[45] seek out opportunities to transfer endangered species conservation responsibilities from the federal government over to tribes (Kraniak, 2015). It further assigned responsibilities to the USFWS and the Bureau of Indian Affairs for assisting amenable tribes to establish economically self-sustaining conservation models such as conservation banking. This mandate also included facilitating mechanisms for each tribe to generate additional income beyond just offsetting the financial burden of conservation management, in order to reduce high poverty rates among indigenous Americans (Olive and Rabe, 2016; Rinkevich, 2008).

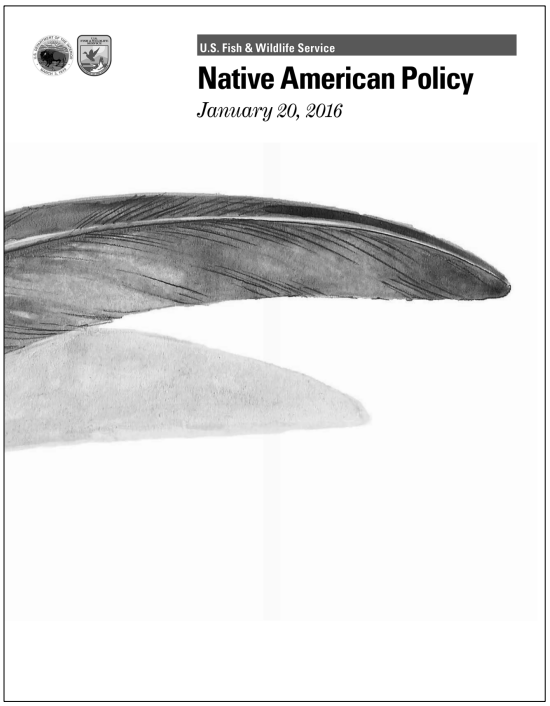


Figure 25. Updated U.S. Fish and Wildlife Service "Native American Policy" Document (Cover Page). Archived public document.

[45] The U. S. Department of the Interior is the federal executive department of the U.S. government responsible for the management and conservation of most federal lands and natural resources, and the administration of programs relating specifically to Native Americans, Alaska Natives, and Native Hawaiians.

The USFWS' *Native American Policy* (2002 – 2016, p. 510) similarly directed the USFWS to:

> Encourage tribes' conservation of their land habitats which sustain sensitive species, recognizing that this requires the tribal government to have the self-sustainable financial means to undertake the required conservation activities.

The USFWS would not directly finance tribes' conservation activities, but instead would demonstrate regulatory flexibility regarding tribes' potential income generation vehicles.

With these mandates in place, the Bureau of Indian Affairs and the USFWS identified tribal land supporting endangered species, and solicited proposals from the tribes for managing their own conservation and building economic mechanisms to support them in this (Interview, Bureau of Indian Affairs, 2018). The timing of the rapid rise of the Indian Gaming industry coincided directly with these proposal submissions during the early 2000s (Eadington, 2011; National Indian Gaming Commission, 2008). The USFWS Regional Field Officer (2018) described the proposal put forth by the Agua Caliente Tribe:

> Their proposal was submitted on their behalf by an attorney who had represented them on their past federal lawsuits. It was presented strategically, cleverly. It quoted [Joint] Secretarial Order 3206 language verbatim to make an argument that income from a casino would assist the Tribe in affording the otherwise daunting costs of maintaining a large conservation bank. It also highlighted that their conservation approach would be based upon the Tribe's history of stewardship of Coachella ecology, making use of their indigenous knowledge that's been passed down through centuries. They chose terminology reflecting that indigenous knowledge was emphasized as being preferred [by the government] in the language contained in both Joint Secretarial Order 3206, and in the USFWS Native American Policy.

As I examine in more detail in Chapter Seven, the rare presence of endangered Desert Bighorn Sheep on the Agua Caliente Tribal Reservation was also pivotal attraction for the federal

government; conservation bank – casino swap was agreed upon, and establishment of both ACTCB and the Tribe's casino was accomplished rapidly.

Fast forwarding to the present, the ACTCB has grown to conserve 19 endangered-listed fauna species and eight endangered-listed flora species. The Agua Caliente Tribal Council's Vice Chairman (Interview, 2018) explained their habitat enhancement philosophy:

> With the large amount and different types of land we have to work with, we aim to carry out continual improvements and conserve more California-specific species in the future by combining the centuries of knowledge our tribe has about this land, combined with modern 'scientific' recommendations we get from a consulting firm we hired in 2008. Our ancestors described this land as overflowing with life, and that's the benchmark we'll hold ourselves to.

Since its establishment, the ACTCB's transactions of its conservation credits have followed three different pathways:

1. Some conservation credits were sold on the open credit market early in the bank's history, mostly to ExxonMobil and Southern California Edison, to offset damage done to burrows of endangered-listed Desert Tortoises (*Goperus Agassizii*) during installation of 2,700 power-generating wind turbines (Agha et al., 2017) in the Coachella Valley [see Figure 26]; this sale helped fund the casino construction (ACTCB Staff Interviews, 2018).



Figure 26*. Southern California Edison wind turbines, San Gorgonio Pass, Coachella Valley. Photo by Gregory Anderson, 2018.*

2. Some species and habitat credits are transacted by the ACTCB to compensate for habitat loss resulting from the Tribe's own land-business development projects; in other words, the Tribe's corporate entity purchases credits from the Tribe's own bank, as needed (Helix Environmental Planning, 2008). These transactions are of course still registered with and approved by the state.

3. Some credits are transacted through the Tribe's unpopular practice of charging 'mitigation fees' to its land-lease tenants [see Section 6.4] to compensate for tenants' development-caused habitat – species impacts (Interviews, Tribal Council Vice Chair, 2018; Palm Springs City Clerk, 2018).

The ACTCB's management declined to disclose the pricing of its bank credits.



Figure 27. The Agua Caliente Casino Resort, with conservation bank land both in the foreground, as well as encompassing the highlands and mountains behind. Photo by Gregory Anderson, 2018.

Like the conservation bank, the Agua Caliente Casino Resort it is linked to has also become quickly well established. The 45,000-square foot (4,181 square meters) casino and 16-floor hotel comprising 340 luxury guest rooms [see Figure 27] earned the Cahuilla Tribe over USD $800 million in revenue in 2017 alone (California Nations Indian Gaming Association, 2018). Because the Tribe is sovereign, it is not required to pay any federal or California state tax on such earnings (Morain, 2003). While much of this capital accumulation has improved the economic status of the Tribe's 410 members, some has also been invested back into improving and expanding the tribal conservation bank (Interview, Tribal

Council, 2018)—as is in keeping with premises of *Joint Secretarial Order 3206* and the USFWS *Native American Policy.*

For example, through investing casino profits to gradually repurchase odd-numbered land parcels situated between the Tribe's even-numbered reservation parcels [see Figure 24 for repurchase progress to date and planned repurchase], the Tribe is increasing the size and contiguousness of the ACTCB (Interviews, Agua Caliente Tribal Council, 2018). Bonnie and Wilcove (2008), Deal et al. (2012), Good and Rodriguez (2009), Hallwood (2003), Stern (2006), and the USFWS (2017) have emphasized the stewardship value and economy-of-scale benefits of conservation bank design that maximizes the *contiguousness* of habitats to account for conserved species' movement ranges. The Cahuilla's reinvestment in this exemplifies how facilitating indigenous economic development can enable more conservation achievements than could indigenous knowledge alone (Corbera, 2012; McElwee, 2012; Muradian et al., 2010; Pereira and Diegues, 2010; and Zander and Garnett, 2011).

The Agua Caliente Tribe benefits from reinvestment in enhancing the conservation bank through owning its own source of conservation credits from which to 'withdraw' when its corporate entity undertakes additional land development projects (Interviews, Tribal Council Vice-Chair, 2018). For example, the Tribe is now constructing a 10,000-seat sports and concert stadium in central Palm Springs that will incur more conservation credit needs than did the Agua Caliente Casino Resort (Newell and Johnson, 2019; Interviews, Tribal Council, 2018). Being able to expand their own credit supply (through land re-purchase) reflects some of the self-determinable value derivation the Cahuilla benefit from via the 'swap', but I next turn to examining how the derived value supports more specific forms of decolonization for the Cahuilla.

6.2 Diversified Value as a Means to Decolonization

The concept of value derivation from conservation banking introduced in Chapter Five focusing upon a western-centric view of economic, cultural and social value continue to be relevant here, but I expand on this to consider how value facilitated by the 'swap' has interacted with the Tribe's indigeneity and manifests equalizing, and sometimes decolonizing, effects. This contributes to alternative viewpoints appearing in 21st century literature (e.g. Parham, 2012) that counter common decolonial narratives tending to see capitalism as incompatible with indigenous groups.

An interpretation of the events discussed below as representing decolonization is admittedly imperfect and sensitive: for example, it is unavoidably borne of western-centric research practices, and it prompts questions as to whether the Cahuilla's regained independence or decolonization has transpired on capitalists' terms and via success defined by capitalist criteria. However, the mandates like *Joint Secretarial Order 3206* and the U.S. Fish and Wildlife Service's *Native American Policy* that facilitated the 'swap' have a role in the U.S. government's concept of a sort of neoliberal 'transitional justice' (Murdock, 2018) for redressing past harm to indigenous Americans (Balint et al., 2014); consequently, it is relevant to consider if at least some of that has resulted.

If transitional justice is characterized by healing of past political wrongs and a transition to fairer socio-political relations (Arthur, 2009; Jung, 2009; Kymlicka and Bashir, 2008; Quinn, 2009), then I argue that by extension, value now derived by the Cahuilla through the casino and the conservation bank can be interpreted as means for facilitating decolonization through their restored indigenous independence, and opportunities for renewal and reconciliation. Below, I consider the Cahuilla's regained food sovereignty and artistic expression as two examples.

Value → Food Sovereignty as Decolonization

Food sovereignty has been recognized by a number of authors as one path toward, and a marker of, indigenous decolonization (Asfia Gulrukh et al., 2015; Figueroa-Helland et al., 2018; Grey and Patel, 2015). Grey and Patel (2015) find the term 'food sovereignty' to have considerably variable meaning amongst authors in this literature space. Here, I employ their definition: "Food sovereignty is about groups of people making their own decisions about the food system they use, and ownership of their right and jurisdiction to do so" (p. 431).

Vernon (2015) observed that community-oriented Native Americans' food consumption habits have traditionally been matched more to land, place, and relationships then have been those of comparatively individualistic European Americans. Tlatilpa (2015) contends that a reduction in dietary quality amongst indigenous Americans—including the Cahuilla—developed when they were forcibly dispossessed from their land, place, and community self-sufficiency due to the *Indian Appropriations Acts* identified earlier. Vernon (2015) even argues that subsequent U.S. government food distribution programs for reservations were utilized to colonize America's indigenous people; through building their dependence on the government's free provision of low-quality food that eroded their health and self-sufficiency over decades.

Whether or not intentional, the U.S. government's distribution of highly-processed, preserved, low-nutrient food on reservations through the *Food Distribution Program for Indian Reservations* (FDPIR) has been recognized in the literature (Shanks et al., 2016; Smith et al., 2021; Warne and Wescott). Furthermore, the FDPIR's approach for indigenous Americans is different than the *Supplemental Nutrition Assistance Program* (SNAP) approach for non-indigenous low-income Americans; whereas the FDPIR delivers only packages of foods chosen by the program

administration, SNAP provides electronic cash to facilitate free-choice and fresh food shopping at any food store (Finegold et al., 2009).

Once established, the suboptimal food use patterns on reservations have sometimes taken years to reverse. Agua Caliente Tribe members' relationship with food remained adversely altered for many decades after their *Dawes Act* reunification with the Coachella Valley (Interviews, 2018; Bureau of Indian Affairs, 2018; Shah, 2017). Their economic reliance on western-centric food production systems and habits persisted first through federal government-provided food aid and subsidies [1910s – 1980s], then incorporated cheap American fast food resulting in pervasive obesity [1980s – early 2000s] (Bureau of Indian Affairs, 2018; Shah, 2017; Trafzer, 2006).

I learned via fieldwork interviews that it was the economic, cultural, and then social value generated by the casino—conservation bank swap that finally led to the Tribe's reclamation of control over their own food production and policies, and their return to Coachella flora cultivation and agricultural harvesting. Cahuilla mother of five Ameelyehna* (2018) described how this change occurred within a year after the conservation bank and casino were established:



Figure 28. Agua Caliente Reservation cultivation of the Coachella Desert Fan Palm (W. Filfera), whose fruit is eaten raw, cooked, or ground into flour by the Cahuilla. Photo, Gregory Anderson, 2018.

> So, the professionalization of conservation that it required, being accountable to oversight by federal government people, it restarted in a community way what a few elders were still attempting—harvesting and preparing what they eat on-reservation. And then, the [Tribal] Council announced most food served in school,

> and most food sold on-reservation should be produced within reservation borders. The Council said now we had money, we could afford to decolonize our own diet.

The timing of this links not only to derived economic value, but also to heightened social self-awareness as an adjacent component of deriving social value from the casino—conservation bank swap. For example, the Tribal Council Vice Chair (2018) commented:

> After the casino was successful, we wanted to build public perception of the Tribe as a business and community role model in Palm Springs. That needed to include reclaiming our health and diet, to counter the stereotype of Cahuilla obesity and bad health. We re-started on-reservation agriculture and discouraged eating fast food.

Even if entwined with capitalistic activity, investment in indigenous-managed food production has nevertheless helped re-establish the Cahuilla's food sovereignty. It took a flow of value from the casino to help enable that reclamation of tribal jurisdiction over their land – food – life cycle (Interviews, 2018). Figueroa-Helland et al. (2018) have argued that modern food sovereignty may, due to practicalities, contain underlying traces of capitalist or colonialist interests, characteristics, or drivers, but contend that this does not diminish its validity as a path toward decolonization.



Figure 29. Agua Caliente Reservation cultivation of mesquite bean shrubs (Prosopis pubenscens), whose beans are ground into flour. Photo, 2018.

Value → Art as Decolonization

A relationship between decolonization and artistic expression or art therapy, involving both the visual arts as well as dance and musical expression, has been recognized in the literature as

serving a healing role for indigenous Americans (Dufrene, 1991; Leone, 2020; Napoli, 2019; Vivian, 2018). For example, indigenous scholar Michelle Napoli (2019, p. 175) writes:

> I painted the 'Yomunnaka Choyyekke/Beautiful Deer' to witness the harm done to my Native community while also honoring our beauty and the fact that we are still here; we still exist. From my worldview regarding historical trauma, what has happened to my ancestors has happened to me: 'Yomunnaka Choyyekke' is a personal and culturally informed image of power that teaches me how to witness, grieve, and celebrate with brutal honesty all that is our truth.

The art – decolonization relationship has been cited by some authors as valuable in decolonization of existing approaches to education and socialization among indigenous American adolescents (Welch, 2018; Archibald, 2006). Indigenous Americans seek the latitude to depart from western-centric rules, traditions, and structures for artistic expression and socio-cultural exchange (Bradley, 2012; Levitz, 2017). Burton and Dunbar-Hall (2002) have argued, for example, that the way Native American music has been taught in school should be redesigned to incorporate the interpretive perspective of indigenous Americans and free it from stylistic and lyrical influences of post-colonialism. The Agua Caliente Tribe recently invested in shaping how music education is conducted in the school attended by their youth by funding the hiring of teaching staff trained specifically in non-Western-centric music theory and methods (Interviews, 2018).

While art therapy and music as vehicles for decolonization might not necessarily require all the economic, cultural and social value the Cahuilla derive from the casino—conservation bank swap in order to be possible, these abundant resources are nevertheless helpful by



Figure 30. Agua Caliente Cultural Museum digital rendering provided to Gregory Anderson by JCJ Architecture in 2018 prior to project completion. Used by permission.

removing, for example, economic limitations. They are being used to optimize Tribe members' opportunities to develop and showcase their indigenous art and creativity for healing, for confronting ongoing forms of western-centric colonialism, and for preserving the Cahuilla's indigenous identity. At a cost of USD $192 million the Tribe has recently undertaken expansion of its Agua Caliente Cultural Museum to 100,000 square feet (9,290 square meters) to increase its capacity for this purpose (Ghosh, 2015; JCJ Architecture, 2018). According to the Tribal Chairman (2018), "This new museum will allow us to reconnect to our own cultural heritage while sharing it with others" [see Figure 30].

In my fieldwork, I was invited to see the Tribe members' artistic expression that incorporates music, dance, and other visual performance. For example, in Figure 31 the male ensemble performed rap, made beats, and incorporated bird singing, while in Figure 32 female participants engaged in bird-themed dance movements in response to the men's bird singing in Figure 31. This was described by the Cahuilla artists as a way they turn away from the colonial state, and toward one another, to create a space that is socially generative rather than externally determinate. Cahuilla hip-hop artist Arturo* explained:



Figure 31. Males bird singing to improvised beats. Photo by Gregory Anderson, 2018, with subjects' consent.



Figure 32. Females' bird dance movements in response to males' bird-singing. Photo by Gregory Anderson, 2018, with subjects' consent.

> The artistic performance we do here is rooted in ancient bird song that has been passed down, but we are adapting it, building new rap into it in real time tonight. The 'new' is our creative contention with a sometimes-hostile system that has become less overt, less aggressive, but still continues to seek our assimilation.

Young Cahuilla like Arturo, who demonstrate interest and talent in music creation, are financially supported in creating professional quality hip-hop recordings and videos through artistic performance grants administered by the Tribal Council (Interviews, 2018). I observed that the resulting productions tend to synthesize the Cahuilla's indigenous oral narrative practices, modern beats, and decolonial politics messaging aimed at a nation-wide indigenous American youth audience via social media. Arturo noted that grants mean the Tribal Council monitors such messaging:

> If somebody was saying really inflammatory stuff that might be offensive to the government, business partners, tenants, or casino customers, the Council won't want that to go out into the public domain. Actually, those groups who the Council doesn't want you seriously offending were technically the colonizers. But the artistic message is usually about healing and renewal; it's activism but without aggression.

This is consistent with the research of Martineau and Ritskes (2014), who found most indigenous art to reflect "the generative expression of creativity, not the violence of colonial domination…exhibiting a resistant motion to disavow the repetition of such violence and forge new pathways of re-emergence and return" (p. 6).

6.3 Assimilation of Capitalist Identities

I turn next to examining what might be seen by some as incongruent with the decolonization above: capitalist reflections in the Cahuilla's identity. In Section 6.1, I introduced the Bureau of Indian Affairs role in facilitating the profit-oriented *casino* component of the 'swap'. Historically, the

Bureau of Indian Affairs' primary 19th and 20th century mandate and purpose was the cultural assimilation of indigenous Americans into the larger Western-centric U.S. society (Lyden and Legters, 1992). Although the Bureau as well as its interpretation of 'assimilation' have continued to evolve more recently, the term 'assimilation' in economic terms was still its #1 mission statement priority in 2004 when the 'swap' transpired; the term 'assimilation' was only later replaced with 'development' in the Bureau's official vocabulary in 2006 (Palmer, 2007; Bureau of Indian Affairs, 2020).

I contend that encouraging an indigenous American tribe to enter the capitalist casino business does indeed represent an economic assimilation effort, and the Agua Caliente Tribe now displays some assimilated capitalist traits in its approach to managing its casino and land-lease holdings, its lobbying, and some of its conservation bank activity. However, I also show that such assimilation of capitalist traits does not appear to have been overtly forced (as had been done in the past), but rather includes some voluntary uptake on the part of the Tribe based on their own concession to the challenges and opportunities in the current American economic environment. The Vice Chair of the Tribal Council (2018) explained:

> We had to evolve the way we do things to survive in this modern world. We had to either adapt to white business ways, or eventually die out as a tribe. The world is always changing. The casino makes some of our eldest members uncomfortable—they stay out of the business activities and live quiet lives. But our young men are enthusiastic about growing and expanding the businesses; some join the Tribal Administration, and others develop their own enterprises.

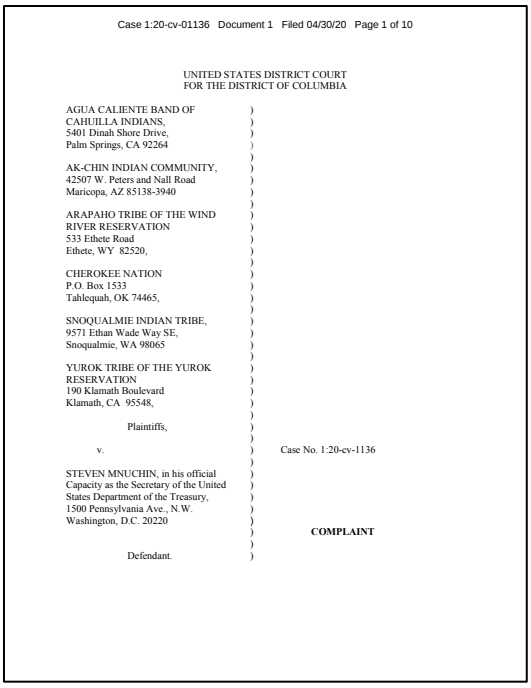
I learned that the Tribal Administration office, in which most management-level operations are conducted, employs a staff comprised of some individuals from the non-indigenous population (Interviews, 2018). Consequently, the four-member Tribal Council, who head the Tribe's corporate hierarchy, are supported and advised by non-indigenous lawyers, finance strategists, operations managers, and information technology specialists who are recruited from corporate America. For example, its current vice president-level executives for management operations, finance, and security operations all come from prior backgrounds of employment with the MGM Grand, Caesars Palace, and Bellagio casinos, respectively, in Las Vegas (Interviews, 2018; Agua Caliente Corporate Bios, 2019). The Assistant Director of Human Resources (2018) explained:



Figure 33. The Tribe's corporate headquarters, where 1200 individuals are employed. Photo by Gregory Anderson, 2018, with consent.

> This organization employs, and needs, three times as many individuals as there are total Tribe members. But also, no one in the Tribe started with any casino experience! The Bureau of Indian Affairs helped the Tribe staff this organization with seasoned casino executives from Vegas who could execute a growth plan that matched the Council's ambition.

Any conjecture that the Tribe has been dominated into assimilation compliance by federal government agencies would seem to be countered by the Tribe's long pattern of boldly challenging federal government agencies by launching lawsuits against them to compel their cooperation on various matters. For example, see Figure 34, a federal lawsuit the Tribe initiated against the U.S. Secretary of the Treasury as defendant after the Tribe's application for a share of emergency federal funding meant to bolster small businesses was denied because the Agua Caliente Casino did not meet the Fund's criteria for a 'small' business. In every such lawsuit I reviewed, the Tribe sought either an outcome of financial capital, or some circumstance that would facilitate their earning more capital (Archived federal and state court records, Sacramento, 2020).



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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AGUA CALIENTE BAND OF CAHUILLA INDIANS,
5401 Dinah Shore Drive,
Palm Springs, CA 92264

AK-CHIN INDIAN COMMUNITY,
42507 W. Peters and Nall Road
Maricopa, AZ 85138-3940

ARAPAHO TRIBE OF THE WIND RIVER RESERVATION
533 Ethete Road
Ethete, WY 82520,

CHEROKEE NATION
P.O. Box 1533
Tahlequah, OK 74465,

SNOQUALMIE INDIAN TRIBE,
9571 Ethan Wade Way SE,
Snoqualmie, WA 98065

YUROK TRIBE OF THE YUROK RESERVATION
190 Klamath Boulevard
Klamath, CA 95548,

Plaintiffs,

v.

Case No. 1:20-cv-1136

STEVEN MNUCHIN, in his official Capacity as the Secretary of the United States Department of the Treasury,
1500 Pennsylvania Ave., N.W.
Washington, D.C. 20220

COMPLAINT

Defendant.

Figure 34. Federal lawsuit by Agua Caliente Band of Cahuilla Indians vs. U.S. Secretary of the Treasury Steven Mnuchin. Archived public court document, 2020.

I suggest that the Tribe's indigenous identity and its capitalist corporat*e* identity are facets or aspects that co-exist; they are not entirely separate, but rather are emphasized differently depending on context. Weaver (2001) argues that there are always multiple facets of an identity, and these can be classified as either internal (self) identification, community identification, or external (outward) identification. For example, the Agua Caliente Tribe's varying identity emphases may be recognized in relation to the land. Their more external, corporate identity appears to resemble Marx's classic vision of capitalism, wherein a dominant land-owning group accumulates wealth by renting access to, and use of, the land the capitalist group owns and dominates (Bryer, 2004; Marx, 1885). The Tribe's corporate identity seems to employ this capitalist model by continuously accumulating more areas of Palm Springs land to rent or develop for income—never

selling it—in a way that resembles the 'landed gentry' model (Burke, 1826) of bygone centuries' colonizer groups. To this identity, the land is itself capital, and ownership of it a profitable right.

In contrast, the Tribe's more internal, indigenous identity conserves the reservation land in its natural state, communally harvesting food products from it in much the same traditional way that has been done for ancestral generations (interviews, 2018). To this identity, the land is itself a spiritual, non-passive substrate, and stewardship of it a reciprocal responsibility (Kidwell et al., 2020; Porter, 2014). It is more reflecting how in many indigenous ontologies land is alive, and its life is part of the peoples' ancestral histories (Burow et al., 2018; Reid and Sieber, 2020).

This context-dependent identity concept is not so different from the externally professional identity many people present and emphasize in their work lives and workplaces, versus the different personal one they emphasize when interacting with their friends or family at home. Considered this way, the Agua Caliente Tribe's assimilation of a capitalist approach to business in its corporate 'life' or identity need not mean its indigeneity is substantially altered or compromised.

The concept of context-specific identities as a way of interpreting the extent of the Cahuilla people's assimilation is also supported by their self-awareness of these in their own behavior. I learned that the Agua Caliente Tribe recognizes the relative appeal or usefulness of different identity emphases, such that the Tribe strategically highlights some, and downplays others, according to the audience with which it is engaging [see also Chapter Seven]. For example, I note how it emphasizes its identity characterized by ancientness and 'oneness' with the land, and even to a limited extent its aesthetic and historic appeal as 'exotic,' in certain public contexts aimed at Palm Springs tourism consumers [Figure 35, top left and bottom left]. The Tribe is after all the majority landlord of Palm Springs, a city that is tourism-based. In contrast, in marketing imagery designed to promote the modernity and luxury of the Agua Caliente Casino and Hotel interiors which mirror that of the

Caesars Palace and Bellagio hotel – casinos in Las Vegas, most cultural or historical references relating to the Tribe are omitted [see Figure 35, top right and bottom right].



Figure 35. Top and bottom left, the Agua Caliente Tribe highlights its indigenous identity and cultural history for tourism contexts. Photos, Gregory Anderson, 2018, with consent. Top and bottom right, the Tribe's highlights its modern, commerce-oriented identity in its Casino-Hotel-Resort interiors; photos used with permission.

Cuillier and Ross (2007) found such selective, context-strategic use of identity to be a frequent practice among American indigenous tribes engaged in the casino industry. They conducted a framing analysis examining how tribes represent their indigenous identities online, depending on whether or not they owned a casino. The study found that most casino-owning tribes either presented their indigenous identity with reference only to their gentility, or did not highlight their indigeneity at all in favor of focusing on assimilation of modernity. In contrast, most non-casino-owning tribes presented their indigenous identity consistently and strongly, framed with political empowerment, and "assertions of sovereignty and resistance" (Cuillier and Ross, 2007, p. 197).

I found that the Agua Caliente Tribe—in its corporate identity mode—also demonstrates assimilation of the capitalist practice of using lobbying as a corporate *investment*, but with the added twist of using its sovereignty as a competitive advantage (Boehmeke and Witmer, 2015). Lobbying by corporations that seek to influence policy in directions that maximize their profit, reduce their competition, and minimize restrictions on their activity is one of two main categories[46] of lobbying in the U.S. (Drutman, 2015) and is treated as a capital investment (Alexander et al., 2009). I argue that the Agua Caliente Tribe's lobbying activity also falls into the corporate investment category. Firstly, the Tribe's lobbying has focused on reducing competition by fighting proposed policy that would allow new, non-indigenous competitors and even other, less wealthy tribes to enter the casino sector in or around the Coachella Valley (Palermo, 2016). Second, the Tribe's other lobbying has focused on fighting proposed policy that would enact restrictions to limit expansion of the Tribe's casino size (Dreier, 2007). Third, the capital amounts the Tribe invests in lobbying are comparable to those spent by large corporations (Analysis of California Fair Political Practices Commission lobbying records, 2018)[47], and the benefits when successful are measurable as profits and market share.

The capitalist character of the Agua Caliente Tribe's lobbying behavior differs from that of other indigenous groups discussed in the literature, which has typically involved small expenditures and a focus on land rights or social justice. For example, the research of Davis (2008) and Oldham and Frank (2008) discusses indigenous peoples' lobbying to gain uptake of the United Nations Declaration on the Rights of Indigenous Peoples setting standards for survival and dignity; and the

[46] The other being advocacy.

[47] The CFPPC publicly tracks all lobbying expenditures in the state (amounts, issue being lobbied, by whom). From 2005 – 2018, the Tribe's annual lobbying expenditure in California averaged USD $550,000 for casino – gambling legislature. For comparison, those of Chevron and Sherman-Williams Paint Co., averaged $640,000 and $500,000 annually (respectively) during the same period (CFPPC, 2019).

research of Dyson (2011), Niezen (2009), and Titifanue et al. (2018) discusses indigenous Americans' grass roots internet-based convening of a transnational collaborative network to lobby for political recognition of indigenous identities.

6.4 Tension and Marginalization Bubbling Up in Palm Springs

As the Agua Caliente Tribe has accumulated wealth and local power since the casino—conservation bank swap, pre-existing economic inequalities and power dynamics between the Tribe and the non-indigenous population of Palm Springs have been somewhat inverted in their inequity. Today, the Tribe as an entity, as well as some of its entrepreneurial members individually, own much of the land of Palm Springs and are the landlords of many non-indigenous members of the community (Akee, 2009; 2014). In interviews (2018), non-indigenous business owners and land developers expressed feeling somewhat marginalized, disadvantaged, or even—in their words—"dominated" by the Tribe.

For example, they described being comparatively disadvantaged in business because they face tax obligations and zoning restrictions from which the Tribe members are not only immune due to sovereignty, but that are—in the case of zoning—partly imposed by the Tribe itself (Interviews, 2018; Agua Caliente Band of Cahuilla Indians Land Use Ordinance, 2011). The tax responsibilities reduce net non-indigenous income, and the zoning laws limit non-indigenous land developers' options to construct profitable project designs. Gary* (2018), the non-indigenous owner of a Palm Springs hotel construction company commented:

> The Agua Caliente Tribal Council influences Palm Springs' zoning ordinances in ways that give them a competitive advantage in developing commercial properties. And on land they own, they've set so many zoning regulations that make compliance expensive that it's almost cost-prohibitive for anyone other than them to build

here.[48] But when you do, environmental compliance ends up filtering through them. Not fair.

Palm Springs' municipal environmental codes that specifically address species habitat compensation requirements for developers[49] do require that the offsetting be local, within the Coachella Valley; the Agua Caliente Tribal Conservation Bank is currently the primary compensation source qualified to meet that 'local' requirement (Palm Springs Municipal Code 8.95.050). For developers using land leased from the Agua Caliente Tribe, this means they must purchase the necessary species – habitat compensation from their own landlord. Since 2011, this has been billed to such developers as 'impact mitigation fees' and the City of Palm Springs assists in enforcing collection of these fees by withholding building permits until the impact mitigation fees are paid (Palm Springs Municipal Code 8.95.060; Interview, Palm Springs Department of Building & Safety, 2018).

Based upon transcripts of meeting minutes documented by the Secretary of the Palm Springs City Council, the topic of gradually integrating Agua Caliente Tribal influence and regulation into the City government's administration, policy, and law-making is an ongoing community concern and frequent matter of Council debate (Palm Springs Council Meeting Minutes, 2017-2019). Heated discussions on the topic are also documented in archived video of City Council meetings; all City Council meetings are videotaped, broadcast, and archived on the City's dedicated "Community Television" channel (https://palmspringsca.new.swagit.com). Integrating biodiversity regulation into cooperation between the ACTCB and the City government was undertaken based on the Tribe's successful argument that it would make compliance simpler while helping to solve the loss of

[48] A member of the Agua Caliente Tribe is on the Palm Springs City Council.
[49] 'Developers' also includes smaller examples such as homeowners installing a swimming pool or constructing a garage or terrace.

Coachella Valley's habitats and species (Palm Springs Planning Commission Meeting Minutes, 2014). However, it also preferentially channels mitigation fees to the ACTCB.

In interviews, members of Palm Springs' non-indigenous white population also described feeling unfairly disadvantaged in what they interpreted as two race-related ways by government policies underlying the casino – conservation bank swap, and the derivation of value it enabled. First, some non-indigenous Palm Springs residents expressed resentment toward the U.S. policy that preferentially supports casino gambling entrepreneurship by indigenous Americans as a means to facilitate economic equalization and redress of past oppression (Keohane, 2006) because they view this as "based on race" (Interviews, 2018).

Specifically, these interviewees said they resented the fact that the federal policy helped only the Tribe to accumulate "overnight wealth." Tuch and Hughes (2011, p. 134) argue that such "racial resentment can be a variant of stratification ideology that focuses on the role of racial individualism in shaping white resistance, thereby creating a principle-policy gap". That is, in this case the non-indigenous group might recognize—in principle—a fairness in redress for past oppression of the indigenous group, but the non-indigenous group nevertheless in practice resents what they see as the race-based nature of such a policy. One Palm Springs restaurant owner (2018) stated as much:

> I resent the fact that they use their Indian race card now to get special treatment, like freedom to operate casinos even though nobody else in this state can. Ok, they were forced off their land 200 years ago. But watching them get so rich now, these race policies swing too far the other way; now I'm sh*t on for being white.

The second resentment expressed by members of the non-indigenous population was that the casino – conservation bank swap had introduced what one called "the seedy gambling business" into their quiet, pristine Palm Springs community (Interviews, 2018); in this instance, care seemed to be believed necessary by some to clarify that their objection was to casinos and gambling, rather than to the Indian people [see for example Figure 36, yellow sign]. However, even in Figure 36, note that in the white sign, an objection expressed is again regarding the Agua Caliente Tribe's not having to uphold the same anti-gambling laws as the non-indigenous population (Interviews, 2018).



Figure 36. Non-indigenous Palm Springs residents protest the Agua Caliente Tribe's plan to open an additional casino, photo, 2018, with participants' consent.

Cognizant of these tensions, the Agua Caliente Tribe employs the conservation bank as a mechanism to mitigate not only damaged habitats, but also wounded relations between the Cahuilla people and Palm Springs' non-indigenous population, by sharing aspects of the bank to engage the non-indigenous. For example, I learned during my fieldwork that the Agua Caliente Tribe opens an area of the conservation bank it calls *Indian Canyons* to non-indigenous Palm Springs residents and tourists as pseudo-public park space. This is meant to reduce non-indigenous groups' sense of exclosure, and enable them to share in some benefits of the bank's conserved natural beauty, as well as learn about the Cahuilla's history in relation to that nature. Tribal Ranger-guided walking tours are offered to explore the Tribe's 2,000-year-old rock art, ancient



Figure 37. The ACTCB opens a section of bank land as a public day park called Indian Canyons. The area is patrolled by tribal rangers to prevent habitat harm. Photo by Gregory Anderson, 2018.

irrigations systems, and artefacts collections (Interviews and fieldwork participation, 2018). Tribal Ranger Snow* commented:

> It's critical for community relations that we break down barriers between our Tribe and the white community here. Our Tribe does things like charity for kids, donating a public library, and civic health services; but opening up our conservation bank land to the public has actually been the most powerful in breaking down those barriers because outdoor life is why they come to Palm Springs.

I also learned that there are more formalized conservation education events offered at the ACTCB, with the emphasis on a youth and family audience [See Figure 38]. The Tribal Rangers who led the sessions I observed focused on how the Tribe conserves the bank's nonhuman nature using its ancient indigenous knowledge. I observed that two messages were interwoven—and not subtly—into the Tribal Rangers' presentations: The first was that only the Cahuilla have the generations of conservation knowledge necessary to correctly conserve the Coachella Valley; the second message was that the Tribe continually invests money earned from its business ventures into improving and enlarging the bank (Tribal Ranger presentations, 2018). The effect is one of legitimization similar to that discussed in Chapter Five, whereby the ecological value of the work done at the conservation bank is used to legitimize the bank owners' derivation of diverse forms of economic and social value. Tribal Ranger Hawk* commented:



Figure 38. Community education on Agua Caliente Tribe's indigenous approach to conservation at the ACTCB. Photo: Gregory Anderson, 2018, with consent of subjects.

> It's a chance for us to show a different side of us and maybe expand peoples' minds or impressions of us some. We don't want to be labelled as a 'casino tribe'; here,

> people can see that we're stewards of nature and caretakers of the land, who just happen to run a casino business, which I would add, helps pay for this.

More recently, members of the non-indigenous Palm Springs community protested the Tribe's July 2019 announcement that it would build the aforementioned 10,000-seat sports-entertainment arena on a Tribe-owned parcel of Palm Springs. Again, the primary objection was that Tribe is not subject to the same state and city laws that govern the non-indigenous population, demonstrating a lack of either acceptance or understanding of the Tribe's sovereignty. In a letter to the City Council published in Palm Springs' *Desert Sun* newspaper, non-indigenous resident Marksbury (2019, p. 8) wrote that:

> The city and the Tribe co-exist under what I see as a short-sighted arrangement that allows the sovereign nation carte blanche exemption from local controls. As a result, whatever the Tribe decides to do with the city's future is practically unfettered, leaving the rest of the citizens impotent in the face of game-changing actions.

Finally, the year 2020 revealed more fully the extent to which undercurrents of racial tensions and inequality exist in the U.S. Even while the Agua Caliente Tribe and Palm Springs' white populations struggle over power and benefits relationships, the Tribe employs members of the same immigrant Hispanic population introduced in Chapter Five in sub-living wage positions such as casino – hotel housekeepers, gardeners, and maintenance workers—leaving a currently marginalized group to feel exploited by a formerly marginalized group. If environmental changes or interventions trigger unequal benefits distribution, this is made all the more complex in a broader national climate that continues to exude racial division beyond what any 'swap' can readily remedy.

Conclusion

Examining as a case study the Agua Caliente Tribal Conservation Bank, this chapter has drawn upon a combination of indigenous, decolonial, and conservation political ecology

discourse to analyze the utilization of conservation banking as a joint mechanism of green neoliberalism and decolonization. Specifically, I have argued that in this case neoliberal state policies packaged conservation banking together with a capitalist economic development scheme involving casinos which enable decolonization via renewed economic and ecological empowerment. In this capacity, conservation banking facilitates for the Agua Caliente Tribe a beneficial derivation of economic value that underwrites their independence, social value that honors their indigenous-directed conservation, and cultural value that informs their reframing of their relation to the modern business world. Yet I have also shown that it functions somewhat paradoxically as an assimilation mechanism that defines their success at least partly in neoliberal terms and by western-centric capitalist ideals.

I suggest that the combined result might be interpreted as a new or original hybrid model of capitalism through which the Cahuilla make use of conservation banking as a springboard for capital accumulation, then expand and diversify value generation through multiple streams that draw on both indigenous and non-indigenous approaches. Although the conservation springboard and integration of environmental considerations into the Tribe's business approach might reflect 'green capitalism' or 'eco-capitalism' in some respects, key aspects such as the Tribe's incorporation of indigenous knowledge and priorities cause it to transcend such terms. This confirms what Chapter Five also showed about the California conservation banking model: it allows for the flexibility of each owner to entrepreneurialize their bank in order to capitalize on the unique circumstances, networks, and ambitions they bring to it.

Empirically, the chapter demonstrated the above in three ways: First, it showed that U.S. federal policies in the early 2000s formed a rare convergence of mandates that simultaneously divested the government of responsibility for financing and implementing conservation of

endangered species on Native American reservation lands, while at the same time facilitating the Tribe's economic capacity to conduct that conservation autonomously.

Second, the chapter argued that on the one hand the 'swap' arrangement enabled the Tribe to accumulate capital to support the Cahuilla's decolonization through achieving food security, and using art and music expression to redefine and share its indigenous experience; yet on the other hand, this swap arrangement promoted the Tribe's assimilation of a part-time capitalist corporate identity.

Third, the chapter showed that the above developments reconfigured preexisting power dynamics and distribution of benefits between the Cahuilla and Palm Springs' non-indigenous population, such that the Tribe felt compelled to use the conservation bank to help mediate social tensions, even while some of its assimilated capitalistic behavior fuels some of those same tensions. The chapter also recognized that racial tensions, which 2020 revealed to be endemic across the U.S. play a role in the above dynamics.

This chapter contributes to debates on indigenous decolonization and the politics of conservation an original set of insights into what can result when the dynamics of green neoliberalism, conservation banking, and indigenous groups are interwoven. It is hoped that through such examination of the extent to which a conservation bank in California engages with and impacts surrounding human geographies, increased consideration for the distribution of benefits across *all* stakeholders might become the norm in conservation bank planning

CHAPTER SEVEN:

CHARISMA, COMMODIFICATION, AND ABSTRACTION: IMPLICATIONS FOR NONHUMAN NATURE IN CALIFORNIAN CONSERVATION BANKING

In this chapter, I position the discussion within the context of existing critical discourse on the ways in which market-based biodiversity conservation approaches tend to emphasize charismatic species, and commodify and abstract elements of nonhuman nature. As introduced in more detail in Chapter Two's literature review, authors including Dempsey (2016), Lorimer (2006a, 2006b; 2007; 2015), and Robertson (2006) have examined aspects of how charisma and commodification influence human – nonhuman interaction and biodiversity conservation. In a related vein, authors such as Bowker (2005; 2000a; 2000b) and Apostolopoulou and Adams (2017) criticize market-based conservation for abstracting nonhuman lives, and treating them as mobile, interchangeable, and disconnected units.

I revisit my case studies from Chapters Five and Six in order to contribute to the above discourse by analyzing how endangered-listed and charismatic species are more likely to be saved by conservation banking in California, while wider ecologies are neglected, through commodification that views the species as fungible or mobile abstractions. I argue that in Californian conservation banking, the state's mandating of preferential treatment for endangered-listed species, combined with the influence of species' charisma, virtually require such commodification and abstraction of nonhuman nature in order bankers to viably participate in the sector. I illustrate that rather than always supporting biodiversity, the emphasis on these dynamics in California's approach sometimes compromises the complex and interrelated ecologies involved.

Although correctly termed 'market-based,' I show that California's conservation banking model is actually more of a hybrid of free market integrated with an underlying state-imposed

compliance with the institutionalized, endangered species-focused priorities introduced in Chapter Four (Rea, 2017; Holling and Meffe, 1996). Consequently, it is useful to note at the outset that while the conservation banks' actions contribute some of the more visible commodification and abstraction of the nonhuman participants, the state sets much of this in motion to begin with through the design of its conservation banking model and governance. I also note that there is variability in the usage and interpretations of the term 'commodification' in the literature (Castree, 2003b), so it is also helpful if I clarify the particular definition with which I am working here. For the purposes of this chapter, 'commodification' denotes the socially constructed conversion of an entity, characteristic, or concept into an objectified abstraction or thing having a capital use value or exchange value (Appadurai, 2005; Castree, 2003b; Marx, 1867). This meaning involves human-centered, and often hierarchical, assessment of the value of that which is being commodified.

I note that political ecologists often attach to the term 'commodification' connotations of a corruption of that which is commodified (Osborne, 2017; Castree, 2007); indeed, in the case of commodification and abstraction of nonhuman nature, it can result in unintended consequences. This is significant for many reasons that are broader than the scope of this thesis, but specific to conservation banking, it matters because it can lead to the opposite of true biodiversity conservation. Brewer (2013) argues that environmental market-related commodification of a species can reduce its adaptive capacity to respond to climate change by preferentially emphasizing over time the *favored* species or type, at the expense of trait variation and species diversity. The risk of such a consequence is an underlying theme woven throughout this chapter.

The chapter consists of three sections, organized into a somewhat temporal, sequential flow. Section 7.1 examines how species become 'endangered'-listed and drawn into California's

conservation banking system, and introduces the role and influence of nonhuman charisma. Section 7.2 analyses the commodification endangered-listed species undergo as they move through California's conservation banking system. Section 7.3 examines potential consequences of Californian conservation banking's commodification of species in terms of their abstraction from ecological relations, territorial connections, and temporal relations—with a result being that a conservation bank can become an arena of interspecies competition and unbalanced nonhuman ratios.

7.1 How Species Get Listed as *Endangered*

A classic reality television show format places a group of strangers together in a spatially-limited habitat having some degree of enclosure or sequestration, wherein these 'contestants' must compete to earn immunity from being eliminated—an ongoing threat of being voted 'off' or 'out'. Contestants' survival strategies include being charismatic and popular to inspire political alliances or public audience support. Before long, they also are embroiled in competition for resources, and for self-protection from the predatory tribal behavior of their fellow contestants. The last remaining survivor wins, being named "Sole Survivor," or some similar title indicating the contestant's triumph over peers. Loyalty of viewing audiences for such programs year after year indicate that the human psyche inherently identifies with the type of competition this concept reflects (Wright, 2006).

California's conservation banking system asks much the same competition of nonhuman participants: First, a species is entered into a sort of competition to gain listed status on the *Endangered Species List*; then, a paradoxically victorious[50] listed species is commodified and competes for human-perceived valuation; it is installed on a conservation bank where it might

[50] It is a paradoxical victory in that the species supposedly most in jeopardy of extinction win the protection that being endangered-listed bestows.

compete further against other conserved nonhuman colleagues for equal or preferential access to resources and protection by the bank. Throughout, nonhuman lives are challenged to justify their existential value by competing as 'political animals' for support, implying their value is not viewed as intrinsic, but is instead viewed as existing only relative to hierarchical human validation or neoliberal-capitalist state sanction.

Of course, the nonhuman lives involved do not themselves literally compete as in the above human-conceived analogy; rather, I show in this chapter that it is the state's, and the capitalist bank owners', commodified conceptualizations of nonhuman liveliness that are put into competition—by humans and, in many ways, for human benefit. However, in California conservation banking the analogy is nonetheless apropos, and as some species 'win,' other species or ecologies certainly can 'lose.'

Competing to be Listed

Since California's conservation banking system tends to favor and approve banks based on their capacity[51] to host and protect an endangered-listed species, being selected for listed status might bring the recipient a triumph of increased attention to its welfare. I do not suggest that being imperiled is itself a triumph, but endangered-listed species are not always the *most*-imperiled, and the endangered listing process is not entirely objective (Ando, 1999). Instead, I argue that the process is political, and threatened species are also put into competition for popularity or political favor in order to be endangered-listed.

[51] Either by being the native habitat of the endangered species, or by containing habitat that can be readily adapted to host an endangered species.

There are two pathways [see Figure 39] through which a species may come to be listed under the *Endangered Species Act* rules: The *Petition* pathway, and the *Agency-Initiated* candidate assessment pathway (USFWS, 2018). For listing by petition, any interested member(s) of the public may petition the U.S. Secretary of the Interior, or the Secretary of Commerce, or the state Governor, to assess a species for listing as an endangered or threatened species (Brosi and Biber, 2012). For agency-initiated candidate assessment, biologists on the staff of the U.S. Fish and Wildlife Service (USFWS) or the state [here, California] Department of Fish and Wildlife (CDFW) recommend species as listing candidates (Nicholopoulos, 2000).

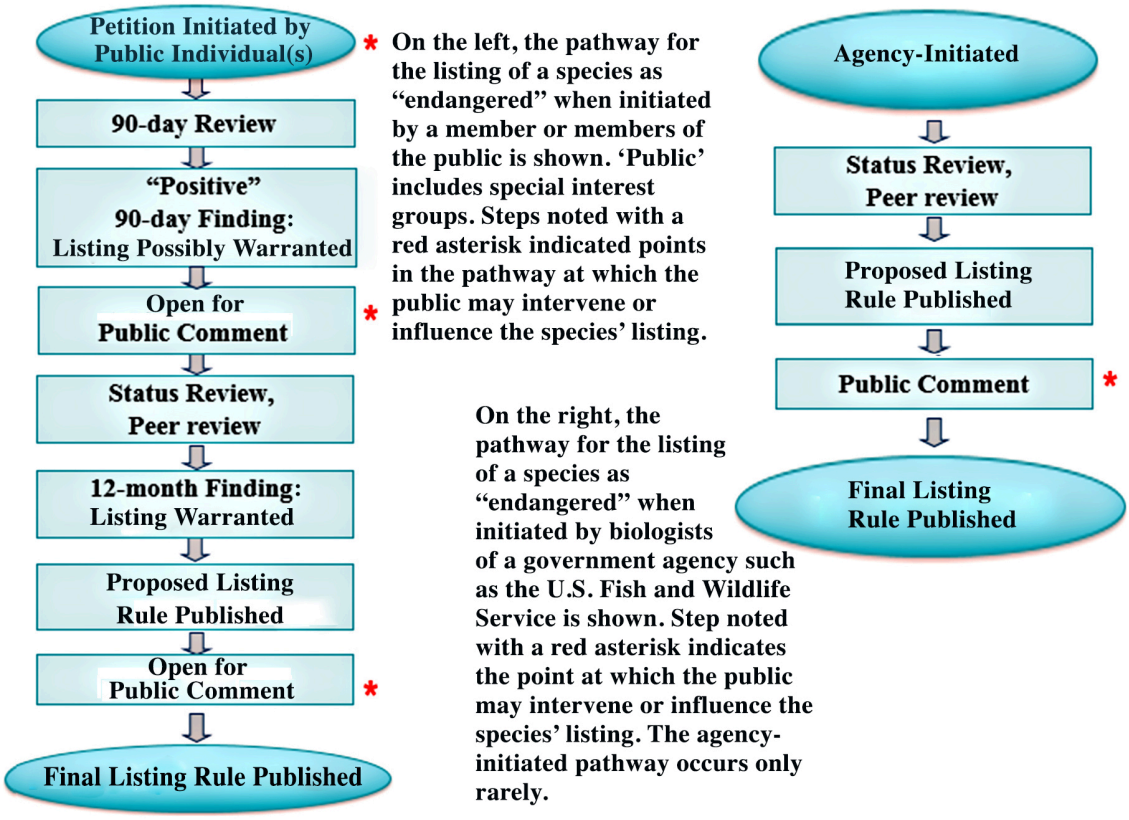


Figure 39. Flow diagrams of the two federal/California endangered listing pathways. Produced by Gregory Anderson based on information provided by the U.S. Fish and Wildlife Service (2018).

Steps along both pathways not only allow for, but also solicit, public engagement—opportunities for citizens to cast figurative votes for popular choices such as in the form of special interest group lobbying (Ando, 2001; Peterson, 1999; Holland, 1996). Public interest groups can for

example act directly through petitions or online commentary, or work indirectly through influencing members of Congress. The involvement of private citizens and special interest groups in influencing the listing process has been formalized into law based on the grounds that species' listed status—with all the protections such status initiates—can lead to large economic costs or benefits for affected land-owning citizens and private industries; legislators argued that such citizens should consequently have a say in the matter (Brosi and Biber, 2012).

The *Endangered Species Act* (1973) contains in its wording a mandate against the influence of "economic balance" in listing decisions, meaning the USFWS and individual state agencies that administer the species listing processes must do so without consideration for potential economic effects of their actions (Brown and Shogren, 1998). Consequently, public involvement in the listing process is considered a necessary counterbalance to protect private citizens' economic interests. However, Ando (1999) found that along either listing pathway, it is actually species' subjective charisma and popularity, more than economic impacts, that most inspires citizens to engage in political lobbying to influence species candidates' advancement along the pathway toward successful listing. These pathways can span years.

Example Petition Pathway Timeline: San Joaquin Kit Fox Gains, and Maintains, Listed Status



Figure 40. The San Joaquin Kit Fox, with large ears, dog-like facial features, and long legs, displays aesthetic charisma ('cuteness') and affective appeal that have inspired the public to demand the species' continued listed status for over 50 years. Photo by Gregory Anderson at Kern Water Bank Authority Conservation Bank, 2018.

Pre-1930s: San Joaquin Kit Fox ((*Vulpes macrotis*) inhabited all of San Joaquin Valley.

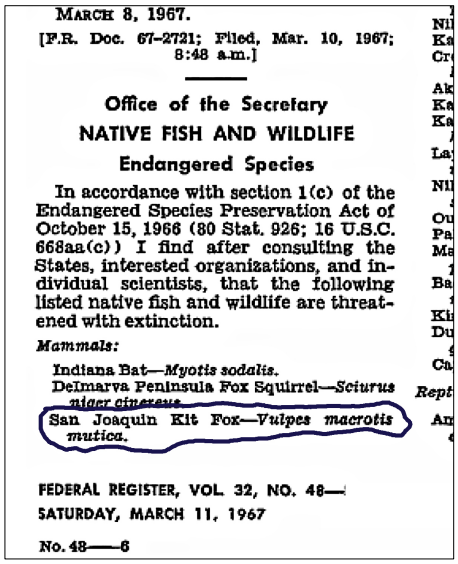
1930s to 1940s: Agribusiness and urban development reduced the San Joaquin Kit Fox 's (SJKF) habitat area by half (Grinell et al., 1937).

1940s to 1964: SJKF's habitat further was reduced and fragmented by residential development.

1965: The non-profit conservation activist organization *Defenders of Wildlife* begins lobbying government agencies to 'list' the SJKF, and engages public support and donations via "adopt-a-kit-fox" scheme showcasing SJKF's photogenic affective appeal (Interviews, 2018).

1966: *Defenders of Wildlife*, jointly with San Joaquin's local chapter of *The Wildlife Society*, petition for a federal endangered-listing review of SJKF by USFWS.

1967: SJKF is endangered-listed by USFWS [see Figure 41].



MARCH 8, 1967.

[F.R. Doc. 67-2721; Filed, Mar. 10, 1967; 8:48 a.m.]

Office of the Secretary

NATIVE FISH AND WILDLIFE

Endangered Species

In accordance with section 1(c) of the Endangered Species Preservation Act of October 15, 1966 (80 Stat. 926; 16 U.S.C. 668aa(c)) I find after consulting the States, interested organizations, and individual scientists, that the following listed native fish and wildlife are threatened with extinction.

Mammals:

Indiana Bat—*Myotis sodalis.*

Delmarva Peninsula Fox Squirrel—*Sciurus niger cinereus.*

San Joaquin Kit Fox—*Vulpes macrotis mutica.*

FEDERAL REGISTER, VOL. 32, NO. 48—
SATURDAY, MARCH 11, 1967

No. 48——6

Figure 41. Original 1967 publishing of San Joaquin Kit Fox listing as Endangered by USFWS (Archived Document, California State Archives, 2018).

1970: *Defenders of Wildlife* and San Joaquin's chapter of *The Wildlife Society*, petition for a state endangered-listing review of SJKF to be conducted by California Department of Fish and Wildlife (Interviews, 2018).

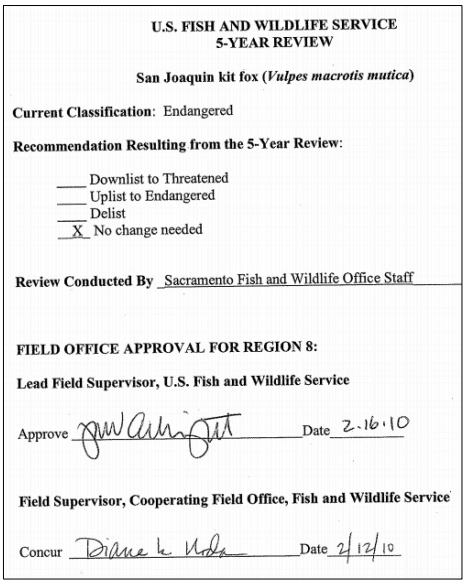
1971: SJKF is endangered-listed by California Department of Fish and Wildlife.

1997: Kern Water Bank Authority Conservation Bank is approved based upon its having SJKF in-residence.

2000: *Defenders of Wildlife* forms alliances with the California Cattlemen's Association and California Rangeland Conservation Coalition to re-purchase and reconnect SJKF's fragmented habit, consolidating SJKF lobbying strength.

2007: The wildlife lobbying group *Forestwatch* blocks a petition by the oil and gas industry requesting that the SJKF be delisted during the species' USFWS Five Year Review of Status, on grounds of "excess economic burden on industry."

Once endangered-listed, the species must still sustain public support to help maintain its ongoing listed status. That is because the USFWS or the state wildlife agency is required by *Section 4(c)(2)* of the *Endangered Species Act* to conduct a status review of each listed species every five years (ESA, 1973) to evaluate whether the species' status has improved or declined since it was listed, or since the most recent 5-Year Review.



U.S. FISH AND WILDLIFE SERVICE
5-YEAR REVIEW

San Joaquin kit fox (*Vulpes macrotis mutica*)

Current Classification: Endangered

Recommendation Resulting from the 5-Year Review:

___ Downlist to Threatened
___ Uplist to Endangered
___ Delist
_X_ No change needed

Review Conducted By Sacramento Fish and Wildlife Office Staff

FIELD OFFICE APPROVAL FOR REGION 8:

Lead Field Supervisor, U.S. Fish and Wildlife Service

Approve _____ Date 2.16.10

Field Supervisor, Cooperating Field Office, Fish and Wildlife Service

Concur _____ Date 2/12/10

Figure 42. Resultant finding of 5-Year Review for San Joaquin Kit Fox (Archived Document, USFWS, 2010).

Based on that review, the USFWS or state agency makes a recommendation of whether or not the species' status should be maintained or downlisted [see Figure 42]. Members of the public and special interest groups have the opportunity to *again* lobby or exert political influence during each 5-Year Review (USFWS, 2018; Archived SJKF 5-Year Review, 2010).

In the politics of who gets listed, human affective preferences matter. Hardisty (2010) finds that in ecological decisions like those involving the *Endangered Species List*, human preferences tend to carry more influence than objective criteria; those species who trigger human affect to mobilize special interest groups can thus gain the life-saving advantage of popularity not unlike that of competitors in the aforementioned television show analogy. Czech et al. (1998) argue that so-inspired public groups ascribe political power onto their favored species; the interest group then holds that political power in trust for the species and uses it to influence the allocation of subsequent conservation benefits accordingly. I suggest that if getting endangered-listed can in this

non-objective way convert charismatic species' advantage into receipt of more conservation benefits, then through such dynamics the *Endangered List* cumulatively shapes benefit and cost distribution patterns, unevenly, across many species.

If charismatic species get preferentially listed, they can also be more readily commodified by a conservation bank.[52] Consequently, it is helpful to clarify what that charisma is. Lorimer (2007) describes a three-part typology of nonhuman charisma, comprising ecological, aesthetic, and corporeal charisma. Rather than viewing nonhuman charisma as something ethereal or intangible, this conceptualization recognizes nonhuman charisma as a set of very definable qualities that trigger an affect response in humans (Ducarme et al., 2013). Specifically, 'ecological charisma' refers to the particular combination of relatable traits that make up an organism which enable humans to be identify and differentiate it from other organisms. 'Aesthetic charisma' refers to the aesthetic properties that comprise an organism's appearance and behavior as perceived via humans' visual and auditory senses (Albert et al., 2018; Lorimer, 2007). Finally, 'corporeal charisma' refers to an organism's eliciting resonatory emotions in an observer during physical, tangible interactions in the field.

Charisma Example: Desert Bighorn Sheep

Endangered-listed in 1998 and conserved since 2003 by the Agua Caliente Tribal Conservation Bank (ACTCB), the Desert Bighorn Sheep [See Figure 43] is an example of a species displaying the kinds of charisma that can lead to preferential endangered-listing and conservation. As a large, accessible, diurnal



Figure 43. Desert Bighorn Sheep at Agua Caliente Tribal Conservation Bank, 2018.

[52] E.g. listed species are get banks approved, and listed species credits command higher prices.

mammal, the Desert Bighorn Sheep's anatomical, geographical, and temporal characteristics make the species practical for humans to perceive and observe; this is its *ecological charisma*. Meanwhile, the species' overall *aesthetic charisma* is 'crowned' in particular by the ram's curling horns, a trait which for thousands of years has symbolically connoted deity status [See Figure 44] across ancient cultures including Greek, Egyptian, and Asian, as well as across religions including Christianity and Neopaganism (Salman, 1986).

The Desert Bighorn Sheep's horns also facilitate the species' behavioral aesthetic charisma when males use them theatrically to battle by ramming horns. For human observers, this behavior is both visually compelling, and offers additional, distinct auditory stimulus from the 'crack' when two rams' horns collide. Finally, the ACTCB Bank Manager alluded to the Sheep's *corporeal charisma* by saying that it was his pre-teen experiences growing up in the presence of Desert Bighorn Sheep that made him want to earn a biology degree and have a conservation career:



Figure 44. Left: Temple of Amun, Ancient Nubia, 13th Century BC. Photo by Steve Cameron, used by permission. Right: Roman Jupiter, Italy, 1st Century AD. Photo used by permission of Museo Barracco, Rome.

> I remember me and my friends being mesmerized watching the rams battle, and the power of their body and shotgun sound of their horns hitting so hard. They embodied shear strength, bravery, and honor in the motion—majestic, a life-changing or life-witnessing experience. We would watch them ram horns, and we would mimic their dueling bodies by butting head to chest with our elbows raised up as our 'horns', while making a cracking impact sound with our mouths. We were in a sense becoming their bravado. Thinking that men hunted—and still hunt[53]—these creatures as a trophy sport made me know that I had to protect them. This work I do, it's not just about saving the Bighorn Sheep; it's like saving part of my boyhood.

[53] Remarkably, a limited number of high-priced permits are still sold annually to sport hunters that permit legal hunting of one Desert Bighorn Sheep per permit; these permits are issued by the California Department of Fish and Wildlife, reflecting the agency's traditional enforcement-oriented crossover relationship between hunting and conservation as introduced in Chapter Four (Interviews: CDFW, 2018; USFWS, 2018).

7.2 Commodification of Species in California Conservation Banking

Marx (1867, p. 125) characterized a commodity as "a thing which through its qualities satisfies human needs of whatever kind and is then exchanged for something else." With regard specifically to commodification of nonhumans, Collard and Dempsey (2013) argue that when a nonhuman is employed as a commodity by a human it is often in a relationship characterized by hierarchy and intended to generate value for the human, based on the nonhumans' liveliness and related factors (p. 2682). Conservation banking in California incorporates both the exchange, and generation, of value. While literature has recognized how conservation-banked species become commodities of exchange in their role as saleable species credits transacted between bank owner (seller) and developers (buyer), I revealed in Chapters Five and Six that the species or their liveliness and their particular traits also become commodities of more diversified value generation, and these are exchanged with other stakeholders. For example, such value is exchanged between bank owners and the state, and between bank owners and the public.

To illustrate, I first note that virtually all market-based conservation models like conservation banking might be said to commodify nonhuman lives as objects of exchange on *multiple levels* (Barua, 2016; Appadurai, 2012). California can even be said to commodify the endangered-listing *status* of species in order to incentivize landowners to undertake preservation of such species on their land; that is, the endangered status itself is a significant part of what is being valued and transacted. As I showed in Chapter Four, the state of California is obligated by the Federal and California *Endangered Species Acts* to facilitate conservation of endangered-listed species; to help it meet that obligation, the state exchanges value generation opportunities with conservation bank owners in return for their providing this species conservation service to the state. Commodifying their status is among the first step in abstraction of the species, since the label

'endangered' has more to do with a conceptual quality or categorization than it does the particular circumstances of the individuals involved.

As for commodity exchanges between bank owners and the general public, I found that California conservation banks rely in part on nonhuman organisms acting as conduits of 'affective labor' to influence the public. Barua (2019; 2018) views 'affective labor' as activity by nonhumans that is capitalized upon to produce or modify emotional experiences in humans. The state's assignment of endangered status is enough to facilitate initial establishment of a bank that can sell credits, but a conservation bank is sometimes also reliant on the continued goodwill or tolerance of the public in order to pursue its broader potential range of value generation modalities. Although a bank's charismatic nonhuman commodities can be capitalized upon effectively toward this public relations purpose on the basis of their encounter value, I contend that on closer scrutiny conservation banks may also take this a step further, via affective labor.

Betancourt (2010) describes affective labor serving as a type of buffer between the harsher realities of capitalism and the general public who, without affective labor intervention, might only have feelings of dissent toward the capitalist's activity. In this somewhat cynical view, the capitalist may use affective labor as a tool to distract the emotions of the public, control the narrative, and cultivate stakeholder emotional investment. It is perhaps a less overt labor than that of, for example, the bee who produces honey for its owner-beekeeper to sell, but the result is no less sweet for the capitalist conservation bank owner if it results in tolerance of casino-scale capital generation.

I note here that the idea of nonhuman labor is contested, and not all authors agree on the boundaries of what does or doesn't constitute nonhuman labor. For example, Barua's conceptualization of nonhuman labor is more broadly inclusive then that of authors such as Jocelyne Porcher and Jean Estebanez (2019), who contend that nonhumans must make conscious or

"subjective investment" (p. 26) in a task for it to qualify as labor. Yet Barua's boundaries for the concept are less broad than those of other authors, and in fact there is a variable range as well as difference in criteria *emphasis* among many authors in this space (e.g. Clark, 2014; Coulter, 2016; Shukin, 2009. I suggest that it is the very emotionality with which humans respond to the topic of animals itself that renders consensus regarding their labor unlikely.

The case study conservation banks in Chapter Five and Six benefit from their species' charisma itself, but they also manipulate those charismatic species' circumstances, activities, and behaviors in ways that contribute opportunities for them to influence human observers. For example, in Chapter Five I introduced how the Kern Water Bank Authority Conservation Bank (KWBACB) has come to rely upon popular charismatic bird species to elicit pro-conservation sentiment amongst the human public, greater acceptance of the bank's bird-saving conservation work as being ecologically legitimate, and some tolerance of the owners' accumulation of capital via their water bank. But this involves more than the mere presence or display of the charismatic birds; for example, the managed relocation or 'guided'[54] migration which I analyze in Sections 7.2 and 7.3 compels the birds to engage in altered, lengthier migration patterns to place them at the bank, and to convene in higher density amongst other bird species on water surfaces a fraction of the size of those in their original Sacramento-San Joaquin Delta habitat. Audubon Society birdwatchers don't have to *search* for birds at the KWBCB to observe their behavior; the specimens and their behavior are convened in concentration for them.

Below and in Section 7.3, I show how the Agua Caliente Cahuilla Indians have employed the charismatic Desert Bighorn Sheep at the Agua Caliente Tribal Conservation Bank not only as part of the value exchanged with the state in the bank – casino swap (by virtue of its listed status), but also as affective labor to generate needed feelings of tolerance toward the tribal casino.

[54] Prey and water features are installed on site to entice target species to adopt the site.

Commodifying the Desert Bighorn Sheep

During my fieldwork, I learned through interviews (ACTCB staff, CDFW staff, Palm Springs community members, 2018), that both the Agua Caliente Tribe and its conservation bank have relied on commodification of the Desert Bighorn Sheep (*Ovis canadensis nelsoni*) and its charisma. Federally and state endangered-listed in 1998, the species was pivotal to the Tribe's achieving the conservation bank-casino swap introduced in Chapter Six. That is, the Agua Caliente Tribe possessed on its reservation land a rare population of Desert Bighorn Sheep right at the time the species had been endangered-listed, politically prioritized due to presidential[55] influence, and the subject of lobbying by the *Boy Scouts* organization—a triple confluence of timing, politics, and opportunity. In this Tribe - state relationship, the Bighorn Sheep became a commodity through its "very act of being"—its liveliness (Ben Anderson, 2012, p. 29).

This enabled the Agua Caliente Tribe to rapidly monetize its commodification of the Desert Bighorn Sheep, first by generating enough cash from the initial sale of bank credits to finance construction of the Agua Caliente Spa Resort Casino. The casino was then rapidly profitable, and the Tribe reinvested those profits into buying up the additional Palm Springs land that it now leases to others, as well as in eventually building two more casinos (Interviews, Agua Caliente Tribal Council, 2018). Commodification of the Desert Bighorn Sheep has thus helped enable the Tribe to generate exponential value off of the original casino – conservation bank swap. Because the Tribe's federal casino license are tied in perpetuity to fulfilling its conservation commitments to the state, and because the Desert Bighorn Sheep was the foundational species behind the bank's establishment, the Agua Caliente are incentivized to continue prioritizing the Sheep's conservation and commodification.

[55] President Bill Clinton championed the Desert Bighorn Sheep in 1998, but the species has been a presidential favorite stretching back to President Theodore Roosevelt in 1901; it was his favorite animal to hunt (Saxton, 1978).

However, the charismatic Desert Bighorn Sheep is also popular with the Coachella Valley public. At the same time daily, a herd at the ACTCB descends from the hills, gathering within encounterable proximity (about 10 meters) of human observers. The Sheep engage stakeholders and trigger their emotions in a manner that strengthens the perceived link between the Tribe, and Palm Springs nature and culture (Interviews, Palm Springs non-indigenous residents At and M, 2018). In so doing, it serves to validate the importance of the ACTCB to Coachella ecology and community, and helps legitimize the Tribe's derivation of value from the casino – conservation bank swap. The Tribe also commodifies the flagship species as its own icon of Tribal conservation leadership in the Palm Springs community; during the time period I conducted my fieldwork, the Tribe sponsored local artists to paint totem-like, Tribe- and community-significant interpretations of Desert Bighorn Sheep statues located at high-traffic points around Palm Springs [see Figure 45].



Figure 45. These figures are identical in form; only the paints and images differ to span but link different aspects of Agua Caliente Tribal culture with Palm Springs' culture—reducing perceived separation between the Tribe, the ACTCB, and Palm Springs' public. Photos by Gregory Anderson, 2018.

Marx (1867) characterized as "commodity fetishism" the perception of certain relationships not being between people exactly, but rather between the money and commodities they exchange. I observed that members of the Agua Caliente Tribe and the Palm Spring non-indigenous community have little interaction that does not take place



Figure 46. 'Golden' Desert Bighorn Sheep statue inside the Agua Caliente Casino. Photo by Gregory Anderson, 2018, Palm Springs.

within formalized, market exchange-related contexts, such as business, the casino, or the conservation bank. Consistent with commodity fetishism, their social relationship is often more between the commodities exchanged, or symbols representing them like the Bighorn Sheep statues, than between individuals of either group. The golden Desert Bighorn Sheep statues I observed centrally positioned inside the Agua Caliente Tribal Casino [see Figure 46] and adorning the front entrance of the Agua Caliente Tribal corporate office seemed to embody this fetishism; the Sheep statues reify nature's role in the commercial transactions occurring at both locations.

Despite the Desert Bighorn Sheep's importance to the Tribe and the ACTCB's local role, not all of these Sheep at the ACTCB are originally from the Coachella Valley. Rather, some are an example of how species focused endangered-listing, commodification, and abstraction in conservation banking in California frequently detaches nonhumans from their territorial and temporal bonds. I examine in detail key aspects of this abstraction for the remainder of this chapter.

7.3 Territorial and Temporal Abstraction

Nonhuman natures' biogeographical presence at a particular site is influenced by spatial and territorial dynamics such as the latitude, elevation, scale, and range distances, as well as the climate, water sources, or shelter that comprise the habitat ecosystem. Related to but extending beyond these dynamics via meanings and attachments, is a sense of 'place' that native nonhuman natures share with and contribute to a location (Masterson et al., 2017; Hausmann et al., 2016; Forristal et al., 2014). This may include a perception of an ecological identity, feeling of belonging and familiarity, and security connected to the place and environment, as well as affinity with other nonhumans—and perhaps humans—who inhabit that territory. I hereafter refer to all of the above dynamics as 'territorial' for the sake of efficiency.

Nonhuman nature's biogeographical presence at a site also involves temporal dynamics and connections (George and Zack, 2001). For example, a particular species that inhabits a site *now* may not have been there at some point in the past, or it may possess an evolutionary fate involving eventual migration away from that site in the future. Similarly, the presence of a mobile species at a location may be only seasonal as part of annual migration patterns; nomadic species' presence may be even more intermittent (Runge et al., 2014). Nature-place temporal connections relate not only to a point in time, but also to a chronologically-sensitive evolution that is continually unfolding over an arc of time (Czech, 2004; 2014).

Consequently, effective conservation banking would not only address species' present territorial conservation management needs, but also safeguard the needs of natures that are in the process of becoming, over time (Hinchliffe, 2008). Conservation bank owners impact how, or even if, a conserved nature's territorial and temporal connections and place-based relationships will be preserved (Burgin, 2010; McKenney, 2005). Authors working in the political ecology of place and the political ecology of conservation spheres have argued for respecting place-based connections in conservation management (Adger et al., 2011; Billick and Price, 2010; Olsen et al., 2011; Potschin and Haines-Young, 2013; and Stewart et al., 2013). Despite this, I found that California's species-focused and commodifying approach to conservation banking sometimes detaches nonhuman nature from the above connections. This renders species as abstractions that are 'a-spatial' (Hinchliffe, 2007) or what I refer to as 'a-territorial.' It also sometimes detaches nonhuman lives from their temporal connection to a biogeographical chronology (Bowker, 2005), thus rendering them what I term 'a-temporal'. Specifically, analysis of my case study fieldwork findings revealed such detachments manifest in at least one of the following four ways:

1. Through California's conservation banking governance allowing or even promoting *managed relocation*[56] or *'guided'*[57] *migration* of species to conservation bank sites deemed what I will term 'human-practical'; that is, more economical or more convenient from a hierarchical human perspective;
2. Through the state governance allowing *long-distance* offsetting, whereby species at human-practical conservation bank locations offset species loss occurring at distant locations, such that the conservation bank sites have little contextual resemblance to the spatial and biogeographical habitat context of that which is being offset;
3. Through the state governance's permitting offsetting of species within land of *inadequate size* to accommodate their *habitat range* requirements;
4. Through conservation banking stakeholders' perceiving species as a-temporal and consisting only of their *present form*, without recognition of or provision for species' *future potentials*.

Rendering Species A-Territorial via Managed Relocation

Comer et al. (2015) advance the view that location and sense of place have critical roles in biodiversity conservation as reflected in the geophysical-habitat context, and also as reflected in existent local cultural values regarding habitat management or impact. In response to trending discourse on this issue, U.S. federal conservation agencies recently updated their policies (USFWS, 2018). At the national level, they are increasingly encouraging consideration of species' place-based connections in the design of conservation banks that are overseen by the U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers (Williams et al., 2013).

[56] Physically catching and moving individuals from original site to bank site.
[57] Typically, prey and water features are installed on site to entice target species to adopt the site.

However, I observed in my fieldwork that California persists in its more idiosyncratic interpretations of nonhuman – place – human relationships. The orientation toward species commodification in California encourages a sense of ownership of nature, liberating conservation bank owners to manipulate species' territorial conditions and place-based connections. For example, during my fieldwork at the ACTCB, members of the public were invited to witness the delivery [see Figure 47] of eleven Desert Bighorn Sheep undergoing managed relocation from Nevada for release onto the ACTCB, *purchased* to restock the bank's population of the species after losses to mountain lions.



Figure 47. With attendance by members of the local public, translocated Desert Bighorn Sheep are released from transport vehicles into Agua Caliente Tribal Conservation Bank. Photo: Gregory Anderson, 2018.

On arrival, the Bighorn Sheep offered their charismatic liveliness, encounterable presence, and aesthetic appeal such that the local community's emotional investment in the species' fate, the conservation bank's mission, and the Tribe's status as conservation role model was stimulated. Yet, they also performed affective labor: the sheep had endured the stress of being transported 500 miles, and the stress of arriving in a foreign ecology, such that they acted touchingly confused and lost after they stepped out the transport vehicles. Attendees were moved to voice audible comments of encouragement and click their cameras every time the Sheep ventured a hesitant step away from the vehicles.

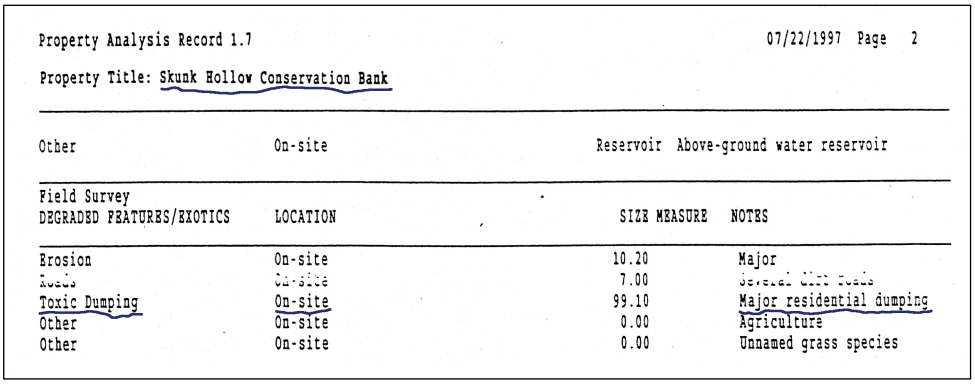
I was optimistically told that these translocated sheep would benefit by gaining a larger, better-managed habitat range area (ACTCB interviews, 2018), but I learned from ACTCB's 2015 Annual Report to the USFWS that Desert Bighorn Sheep similarly translocated to the ACTCB three

years prior had experienced difficulty adapting to the Coachella Valley's extremely hot summers. Lacking Coachella-native Bighorn Sheep's capacity to adjust their body temperature, the translocated individuals repeatedly travelled down from their overheated hills to the cooler valley floor below on summer days (Annual Report, 2015; Palm Springs community interviews, 2018). In so doing, they trampled or ate delicate valley flora species and young cacti, which in turn reduced the available food supply for valley floor herbivore species, as well as directly damaging another endangered-listed species—the less charismatic and less readily-commodified Coachella Valley Milk Vetch (*Astragalus lentiginosus coachellae*). The ACTCB's response was to then *relocate* Coachella Valley Milk Vetch seedlings to a Sheep-inaccessible area of the conservation bank (ACTCB Interviews, 2018).

In the above example, the relocated Sheep were added to the ACTCB's existing native Desert Bighorn Sheep population, for which the ACTCB site has been home for centuries. However, through my fieldwork site visits to other California conservation banks, as well as via review of conservation bank contracts on file with the state, I learned that some of California's conservation banks have been established on human-practical land sites that had been neither previously inhabited by native endangered-listed species nor previously in possession of adequate-quality habitat to support them (CDFW Administration, 2018; Bank Interviews, 2018). Rather, these banks were established based upon agreements negotiated between the state and influential land owners to set aside private land with troubled history, modify its habitat as necessary, and utilize managed relocation or guided migration of sensitive species onto the land to create a bank.

Such is the case, for example, with five California banks overseen by Wildlands Inc., a for-profit third-party conservation bank management corporation, on land that was repurposed for conservation banking after being previously deemed by the county government as hazardous and not practical for rehabilitation to support human occupancy, due to toxic-dumping degradation [see

for example Figure 48] (Riverside County Clerk, 2018). Among these banks are the Skunk Hollow Conservation Bank and the Deadman Creek Conservation Bank, 400 miles and 150 miles away, respectively, from the San Joaquin Valley. San Joaquin Kit Foxes underwent managed relocation to both (Skunk Hollow Habitat Conservation Plan, 2013; Wildlands Inc., 2018).



Property Analysis Record 1.7 07/22/1997 Page 2

Property Title: Skunk Hollow Conservation Bank

Other	On-site	Reservoir	Above-ground water reservoir

Field Survey

DEGRADED FEATURES/EXOTICS	LOCATION	SIZE MEASURE	NOTES
Erosion	On-site	10.20	Major
Roads	On-site	7.00	Several dirt roads
Toxic Dumping	On-site	99.10	Major residential dumping
Other	On-site	0.00	Agriculture
Other	On-site	0.00	Unnamed grass species

Figure 48. Property record for the Skunk Hollow Conservation Bank in southeast California indicating that the land was previously the site of toxic waste dumping. As a result, the property owner was denied permits to redevelop the site for human use. Reproduced by permission of Riverside County Clerk's Office, 2018.

During my site visit to the 684-acre Deadman Creek Conservation Bank [see Figure 49], I observed amphibian, insect, and flora species around the vernal pools, but never saw any sign of the relocated Kit Foxes on the property; this was in contrast to the KWBACB, where I had easily sighted and photographed multiple Kit Foxes, their being native to the KWBACB site. In fact, there is little to guarantee that a translocated species such as the San Joaquin Kit Fox actually remains at a repurposed bank site—a risk that accompanies treating them as a-territorial.



Figure 49. Deadman Creek Conservation Bank, Vernal pool in the rear; vernal pool flowers in the fore. Photo, Gregory Anderson, 2018.

Plumwood (2002) has argued that land use actions which alter nonhumans' territorial existence in order to accommodate human activity presume that nature can *rightfully* be reconfigured to accommodate human territorial and temporal priorities; such a presumption is

hierarchical and dualistic because it suggests nonhuman nature's role in space and time exists under human dominion. Displacing nonhumans to repurposed land sites damaged by humans, so that humans can then develop new sites, risks further perpetuating such cycles on other land, while burdening nonhuman organisms with redemption of human land use errors.

Rendering Species A-Territorial via Long-Distance Relationships

Apostolopoulou and Adams (2017) and Robertson (2004) have objected to conservation banking's offsetting principle when it creates a spatial distance and biogeographical difference between the nonhuman species' location of origin, and the conservation bank. They argue that a significant offsetting distance alters the species' territorial and temporal identities in ways that create a divide between the human and nonhuman lives involved. These authors focus primarily on a social loss that *human* stakeholders might experience from being distanced from such nonhuman nature. However, in keeping with this chapter's nonhuman focus, I concentrate here on the place-based ties lost by *nonhuman*s when the distance between the habitat site being offset and the conservation bank is far, and the biogeography is different, thereby creating a long-distance offsetting relationship.

The limited existing literature involving California conservation banking has presumed geographically proximal offsetting (i.e. Fox and Nino-Murcia, 2005; Mann and Absher, 2014), and perhaps understandably so, as this is what is recommended by conservation banking best practices. However, in my fieldwork, I found that long-distance offsetting was not uncommon in California. For example, the KWBACB offsets species and habitat loss that have occurred in the Sacramento-San Joaquin Delta 215 miles away. Specifically, the KWBACB offers compensatory water and wetland habitat for Delta bird species including the Bald Eagle (*Haliaeetus leucocephalus*), the Swainson's Hawk (*Buteo swainsoni*), and the Bank Swallow (*Riparia riparia*) (Interview, KWBACB Staff, 2018).

However, during site visits to the KWBACB and the Sacramento-San Joaquin Delta I observed that the two locations share little ecological resemblance. The greener, sediment-rich estuary context of the Delta is formed of a convergence between two major rivers and the Pacific Ocean, whereas the drought-prone San Joaquin Valley has fewer naturally-occurring water sources of its own and is flatter and hotter than the Delta.

This disparity impacts the above birds' diet and prey habits. For example, the Bald Eagle's diet in the Delta would normally be 70 percent salmon or other fish (Jackman et al., 1999). In contrast, at the KWBACB some trout are imported as part of guided migration[58] actions, but the Bald eagle's KWBACB diet is comprised mostly of mammals and smaller birds (Interviews, KWBACB staff, 2018) and this alteration to diet composition decreases the eagle's growth and reproduction success (Hanson and Baldwin, 2017). The Bank Swallows experience a different issue but it is no less impactful: whereas in the Delta they would burrow their nests high up in the tall Sacramento river banks (Wright et al., 2010), at the KWBACB they must burrow their nests into the shallow man-made sides of a water transport canal. This renders their eggs more accessible by predators [see Figure 50].



Figure 50. Bank Swallow nests burrowed into 5ft-tall side of water recharge canal at Kern Water Bank Authority Conservation Bank. Photo: Gregory Anderson, 2018.

[58] Using prey visible from the sky.

Rendering Species A-Territorial via Inadequate Range

The spatial range of a species is the geographical area within which that species can be found living; it is the geographic limits of a particular taxon's distribution (Turner, 2006). A species' range will reflect the habitat conditions under which it is biologically equipped to survive and reproduce (Geber, 2008). Within that range, the species population will also demonstrate distribution and dispersion patterns representing the amount of space or proximity between individuals that serves the species' biological survival and reproduction needs (Roy et al., 2009). I learned during my fieldwork that some conservation banks in California cannot fully meet the range needs of the species they are conserving.

The case of the Tipton Kangaroo Rat (*Dipodomys Nitratoides)* at the KWBACB is an example of this. Local to the San Joaquin Valley, the Tipton Kangaroo Rat was California and Federally Endangered-Listed in 1989. The California Department of Fish and Wildlife (2000) determined that the "conversion of the Rats' native habitat to agricultural developments have been the principal threat to this species." The KWBACB contracted with the state to assume offsetting responsibilities for the displaced Tipton Kangaroo Rats in 2000 (CDFW, 2018), which coincided with the time period the bank owners had purchased and populated most of the San Joaquin Valley with pistachio and pomegranate crops (Neblina, 2016, Williams, 1999).

Over the 2000s, Tipton Kangaroo Rats were periodically trapped at their former locations, and translocated to progressively smaller spaces of the KWBACB; Tennant et al. (2013) and Germano et al. (2013, p. 266; 2010) describe their participation in this trapping, relocation, and follow-up monitoring:

> We moved 144 Tipton kangaroo rats, a state and federally listed endangered species, to the [KWBACB] in 2006. To help determine short-term survivorship, we radio-tracked 22 of those rats for 30 days post-release. We placed 14 radio-collared kangaroo rats in cages with artificial burrows (soft release) on site and 8 radio-collared individuals in artificial burrows without cages (hard release). We placed all other kangaroo rats in artificial burrows with (n = 86) or without (n = 36) cages.

Among the 22 Rats radio-tracked, the survival rate was poor (Germano et al., 2013), with evidence they had fallen victim to avian predators (Tennant, 2013). During the same time period, the KWBACB had prioritized attracting large charismatic bird species such as Owls (KWBACB interview, 2018), which are among the primary predators of the Tipton Kangaroo Rat (Goldingray et al., 1997). This shrunk the Rats' safe range area, outside of which they had little shelter from predators. If the Tipton Kangaroo Rats' being endangered-listed and thus somewhat commodifiable had regained them some early conservation traction, it was to become no match for the even more readily commodified charisma of large endangered birds at the KWBACB.

The Bald Eagle, Swainson's Hawk, and Burrowing Owls, being photogenic encounterable nature, help to form the KWBACB's public relations 'face.' They combine ecological and aesthetic charisma which I showed in Chapter Five enable the bank to commodify them for public engagement activities that generate pro-conservation enthusiasm for the KWBACB's work (Skibins, 2013). In contrast, the Tipton Kangaroo Rat, as a camouflage-seeking rodent considered by some of the public to be a nuisance, generates comparatively less public enthusiasm and consequently inspires less allocation of bank space and resources.

The KWBACB staff (Interview, 2018) explained to me that the bank attempts to reduce large birds' predation of the Tipton Kangaroo Rats by providing other, non-endangered prey species meant to appeal more to the birds; this includes adding the aforementioned trout to the water recharge ponds, introducing small rabbits, and adding to the populations of large insects such as the Praying Mantis and Beetles which are compatible with agriculture (Bank Manager interview, 2018). The bank also provides artificial burrows for the Tipton Kangaroo Rats to enhance their protection from predators [see Figure 51]; however, the need for these highlights that the Rats' natural sub-surface burrow development has become insufficient due to its habitat range requirement exceeding space allotted.



Figure 51. Artificial burrows for Tipton Kangaroo Rats at the KWBACB being added to supplement the Rats' options for escaping avian predators. Photo: Gregory Anderson at KWBACB, 2018.

The challenge of shrinking space is not limited to the Tipton Kangaroo Rat. For example, the Blunt-nosed Leopard Lizard (*Gambelia sila*) was endangered-listed after similarly losing 85 percent of its original native habitat to San Joaquin Valley agribusiness. Bailey and Germano (2015) showed that the Blunt-nosed Leopard Lizard requires a minimum contiguous habitat of 618 acres (250 ha) to thrive and reproduce. However, the land area KWBACB currently dedicates to conservation of the Blunt-nosed Leopard Lizard is 450 acres (Interviews, 2018; KWBACB Annual Report, 2014). Additionally, Germano (2019) and Clark (2011) found that the primary predators of the Blunt-nosed Leopard Lizard are snakes, and bird species such as the Loggerhead Shrike. The Loggerhead Shrike is among the bird species the KWBACB actively works to attract through

guided migration, and highlights as being conserved by the bank (Kern Water Bank Bird Survey Report, 2012; KWBACB staff interview, 2018).

Along with the ramifications that come from Californian conservation banking's species focus and commodification that view nonhuman lives as a-territorial, there are also risks of disconnecting nonhuman lives from their ecological chronologies by viewing them as a-temporal. It is to this potentiality that I turn next.

Rendering Species A-Temporal: The Hazards of Nonhuman Time Travel

I suggest that altering species' biogeography in ways demonstrated above also presumes that a species' development sequence over time can be reordered independently, without disrupting the biotic development of it or other species who share its native or adopted habitat. Bowker (2005) writes that such presumptions overlook the benefits species derive from interactively evolving and adapting to earth conditions that are themselves constantly changing. Such bending of time-based relationships might alter the course of evolutionary pathways involving relocated, conservation-banked species or those species with which they interact.

There is some support for this potentiality. Myers and Knoll (2001) indicate that while it is difficult to predict exactly how evolutionary trajectories might be affected, it is logical to expect that conservation which alters the evolutionary pathway of a species' phenotype might then also alter adjacent species' evolutionary adaptations and pathways. California's species-focused conservation interventions that sometimes modify or substitute habitat landscapes might disrupt the temporal sequences of multiple interactive species' beneficial evolutionary adaptation responses (Fischer and Lindenmayer, 2007; Templeton et al., 2001; Fagan et al., 1999).

Part of the issue would seem to again involve the hierarchical views some humans demonstrate toward nonhumans; in this instance, a conservation banker holding such a perspective presumes that humans understand better than nature what is in the best interest of nonhumans, and he forms this opinion largely on what he can observe of certain species *in the present*, or can determine from studying their past. Conservation management based thusly aims to largely retain some pre-existing state of nature, or as Bowker (2005, p. 112) says "to render the present eternal". Hinchliffe (2008, p. 88) points out the flaw in that aim: "Rather than being pre-set matters which only need better management, natures are in the making."

The present-oriented focus on certain species is only increased by their commodification and abstraction into value-generating banking units in California's model, since preserving that recognizable or even fetishized unit—rather than allowing for its potentially less recognizable future incarnation and role in the ecosystem—is what is rewarded in the capitalist paradigm that weighs risks versus benefits. The present-oriented focus might also increase the challenge for the affected species to *compete*, as their nature ecosystem evolves toward the future while those species are unnaturally preserved in their present incarnation. I look deeper into this issue of competition next.

The Pressures of Competition

During my fieldwork, I learned that the endangered species listing pathways introduced in Section 7.1 are not the last round of 'reality show' competition for the nonhuman cast members of Californian conservation banking. In fact, their abstraction through commodification sometimes positions them in even more intense competition once in the conservation bank system and setting, with their ability to hold a spatial territory challenged by increasing rivalries over resources and preferential protection efforts. Both the KWBACB and the ACTCB have, over time, assumed responsibility for conserving many more species than the several, native 'listed' ones with which

they originally gained bank approval. In some cases, this alters relative population ratios amongst the species; in other cases, it brings species into contact with other species with whom they have had little previous close interaction, as was seen above, for example, in the Tipton Kangaroo Rat's deleterious increase in exposure to avian predators translocated from the Delta.

This 'species accumulation' diverges into the respective compositionalist[59] (KWBACB) or functionalist[60] (ACTCB) leanings of each bank: the KWBACB has accumulated large, photogenic bird species including herons, swans, pelicans, geese, ducks, hawks, eagles, falcons, gulls, and owls that proliferate in quantities which overwhelm the presence of non-bird species (Center for Biological Diversity, 2018). In contrast, the ACTCB has accumulated diverse species such as Coachella Valley Cacti and Fringe-toed Lizards, and increased keystone species such as the Desert Tortoise and California Fan Palm, all of which occupy functionalist roles in an ecosystem specific to Coachella Valley (Interviews, 2018; Annual Reports, 2012-2017). As California's conservation banking model does not involve the sale of ecosystem services credits as is done in some other geographies, even California conservation banks like the ACTCB having a more functionalist, ecosystem-*conscious* conservation approach sell credits which are specific to an individual species, or an individual species' habitat.

Despite their differing approaches, the staff of both case study banks conceded they had had past challenges with interspecies competition, particularly excessive predation, due to the translocation and grouping of species within the confines of a limited-range protected space (Interviews, KWBACB, 2018; ACTCB, 2018; USFWS, 2018). A Tribal Ranger for the ACTCB commented (2018):

[59] As introduced in Chapter Four.
[60] As introduced in Chapter Four.

> It gets challenging when you start bringing together species in one location who maybe haven't naturally existed in that close proximity. We can adjust the habitat to suit them, we can move them around to try better neighboring combinations. But a bank creates an unnaturally concentrated competitive situation.

As an example, during one of my site visits at the ACTCB I was shown an area of 64 acres repopulated with seedlings of Coachella-native endangered flora species; these included the endangered-listed Coachella Valley Milk Vetch (*Astragalus lentiginosus coachellae*) that had to be replaced and relocated after being trampled by imported Desert Bighorn Sheep, as described earlier. All were germinated 'in captivity' from seeds. This was the fourth attempt at the project; the first three had failed, it was discovered, because Fringe-toed Lizards were eating the seeds and seedlings (ACTCB Interviews, 2018).

Such interspecies competition within conservation bank borders has not been widely discussed in political ecology of conservation literature, thus being part of this Chapter's contribution. Banks et al. (2002) find that this topic is even under-addressed in conservation science literature. Fortunately, the issue does not follow the reality show analogy to the extreme of producing only one 'survivor,' but this examination nevertheless has demonstrated that in California's endangered species-focused approach, the benefits tend to become unequally distributed amongst the nonhumans. This is consistent with the outcome that was found in Chapters Five and Six to result for the human stakeholders. Yet in both circumstances, the political and economic choices of human elites shape much of the trajectory.

Conclusion

Critical discourse on the ways in which market-based approaches to biodiversity conservation emphasizes charismatic species and commodify nonhuman nature have examined

aspects of how these dynamics influence human – nonhuman interaction and lead to abstracting nonhuman lives as mobile, interchangeable, and disconnected units. By drawing on my case studies from Chapters Five and Six, I have contributed to the above discourse by showing how endangered-listed and charismatic species are more likely to be saved by conservation banking in California, but in their commodification and abstraction they are often rendered a-territorial and a-temporal. I have argued that in Californian conservation banking, the state's mandating of preferential treatment for endangered-listed species, combined with the influence of species' charisma, lead to particular commodification and abstraction consequences such as interspecies competition that may compromise or even harm the interrelated ecologies involved.

Finally, the findings presented in this chapter have implications for the broader field of biodiversity banking. They show California's approach to be limited by an anachronistic species focus by the state that often does not adequately consider ecosystem impact and rewards banks for compositionist methods and rather accumulative goals. From this, a key learning for the broader sector is that if conservation bank owners are incentivized not to consider nonhuman nature as part of a larger functional system, there is a resultant risk that they might end up thwarting, rather than supporting, biodiversity. As is explored in depth later in the Conclusions chapter, California might have greater impact, both in terms of conservation achieved as well as in terms of serving as role model for the sector, by incorporating a more functionalist, ecosystem-conscious approach.

CHAPTER EIGHT:

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

In this concluding chapter, I summarize my key findings and reflect on them in relation to my primary research questions, which were set out in Chapter Two. I also highlight the broader contributions made by this thesis to the conservation and political ecology literature, and outline recommendations for strengthening conservation banking policy and governance in California; with adaptation, these recommendations can also inform conservation banking programs outside of California. Next, I reflect on two limitations in the research. Lastly, I suggest some potential directions for future research in the area of conservation banking scholarship, and reflect on learnings and considerations resulting from this thesis process.

8.1 Factual and Conceptual Conclusions

The analysis in Chapters Four through Seven has produced a series of factual and conceptual conclusions, which I organize here around the research questions to which they relate.

Research Question One: What is conservation banking in California, from where did it evolve, and how does it function?

The analysis in Chapter Four illustrated that California's conservation banking program is distinctive to the state, reflecting its strong historical link with conservation governance centered around the Endangered Species List, and hunting and fishing regulations *enforcement*. The 112-year-old California Department of Fish and Wildlife is first and foremost a state law enforcement and

licensing agency, with conservation program branches having only been added in recent decades. The agency's governance approach, even regarding new program areas, carries forward the influence of its hunting and fishing enforcement philosophies and style.

Conservation banking implementation and governance has proved not to exhibit a universal, 'one size fits all' formula, but rather is something more variable that is specific to the characteristics and history of a particular geography and political economy (Boisvert, 2015). My analysis also showed that California's conservation banking program has been designed to serve a purpose of supporting economic growth in this highly capitalistic state. Specifically, construction and real estate development are California's second largest industries based on GDP (Bureau of Economic Analysis, 2018), so the conservation banking program provides a ready supply of conservation credits that reduces barriers for developers to invest in the state's economy. It enables them to more efficiently comply with *Endangered Species Act* compensation requirements. Identification of the state's motivation in this regard does not detract from California's significant, trailblazing commitment to environmental goals (Hubbard, 2021), but nevertheless demonstrates California's neoliberal prioritization of making conservation compatible with robust economic development.

Chapter Four's discussion of how conservation banking in California functions has revealed that the role of 'the market', particularly with respect to its theoretically possessing 'self-regulating' properties, is less prominent then the "market-based conservation" moniker might suggest. California's conservation credit market provides developers a simple system for identifying and connecting with banks as a first step in initiating the transactions they need to purchase credits. The requirement that the California Department of Fish and Wildlife must review and approve each credit transaction actually interjects the most 'regulatory' governance component. My fieldwork and analysis found little to indicate that California's conservation banks experience aspects of

competition in the credits market on the basis of factors such as quality, price, or supply – demand dynamics.[61]

The credit 'market' also takes a back-seat relative to the day-to-day implementation of conservation banking, and Dempsey (2016) has argued that the market aspects of 'market-based' conservation models like conservation banking have sometimes been overstated. Conservation banking credits can only be sold once in the lifetime of a bank's species habitat; they are then off the market forever. In contrast, the day-to-day actions that conserve those banked species and habitats continue in perpetuity over decades, and so do the bank owners' diversified value streams. In this research, I concluded that issues such as these were worthy of more attention than the oft-touted market aspect because they exhibited sustained and direct impact on conservation bank stakeholder living experiences.

Research Question Two: How are the costs and benefits of conservation banking in California distributed amongst its human stakeholders?

The political ecology-based analysis in Chapter Five finds that profits or benefits from conservation banking in California do not result solely (or even mainly) from the sale of conservation credits, but rather can multiply through Bourdieusian strategies of value diversification, including streams of economic, cultural, and social benefit. The analysis further shows that the neoliberal state actively facilitates this diversified capital accumulation, motivated as it is to make 'swaps' with private capitalist land owners which reward them for establishing a conservation bank by giving them access to large economic development opportunities. In the Chapter Five case study, this is through transfer and privatization of state water that enables the bank owners to build and irrigate an agribusiness empire, but similarly rewarding opportunities are exchanged with other California

[61] This is not to suggest that all markets must involve competition.

conservation bankers. My fieldwork found consistently that what differs among those opportunities is largely just a matter of the contextual details and scale.

Consequently, from the case study analyses it has been possible to yield wider learnings about the nature of benefits for most of California's conservation bankers and the state, in that those cases reflect the principal characteristics of the conservation bank ownership and governance that are to be found widely across California. Unfortunately, the analysis also finds that while the aforementioned swaps benefit the state and elite capitalists, they correspondingly distribute costs rather than benefits to some other stakeholders. That not only exacerbates pre-existing inequalities that are troublingly prevalent in California but, in so doing, stirs some public cynicism toward the conservation banking activities and enclosure. There has for decades already been criticism that despite all of California's conserved natural beauty, it is mostly certain racial and class groups who have access to the benefits of it (García and Baltodano, 2005; Wolch, 2005).

Many details of the case study conservation bank analyzed in Chapter Six differ from the one in Chapter Five, not the least of which include its involvement of an indigenous American tribe, decolonization dynamics, and a gambling casino. Nevertheless, the Agua Caliente Tribal Conservation Bank case also helps confirm that, like the Kern Water Bank Authority Conservation Bank in Chapter Five, the underlying green neoliberal principles of California's conservation banking model are fairly ubiquitous in the sector. Each bank owner entrepreneurializes and diversifies in ways that capitalize on their unique characteristics, networks, and ambitions, but value diversification itself is standard practice across many of the banks.

For the Cahuilla, the early 21st century neoliberal state policies pairing privatized conservation with capitalist economic development schemes created a type of decolonization mechanism (via the conservation bank – casino swap). That this facilitates the Tribe's self-

determination and perpetuation of its indigenous conservation knowledge, while simultaneously encouraging assimilation of capitalist characteristics, seems paradoxical. It is a finding that adds to the complexity of considering the distribution of stakeholder benefits and costs; that is, (1) interpretation and classification of what represents a 'benefit' and what represents a 'cost' is at least partially subjective and sensitive to positionality, and (2) political ecology-based analysis demonstrates that one same stakeholder may simultaneously experience both costs and benefits.

Analysis of the Chapter Six case similarly concluded that the neoliberal state's actions to facilitate bank owners' capital accumulation also encourage an escalation of capitalistic behaviors among Californian conservation bankers. I showed that the Cahuilla Tribe has displayed assimilation of capitalist, corporate behavior since their generation of wealth through the casino – conservation bank swap. In fact, in both case studies, the bank owners developed an expanded corporate structure in parallel to their increase in diversification of value extraction and capital accumulation.

The interview quotations I presented in Chapter Six illustrated that interpretations of benefits versus costs differed even among various members of the Agua Caliente Tribe; whereas members of the Tribal Council were proud of their increased corporate professionalism, other elder Tribe members expressed uneasiness regarding the shift away from traditional and spiritual ways of life. Meanwhile, younger Tribe members' views presented in Chapter Six in relation to artistic expression (such as via hip hop) as decolonization revealed a generation that doesn't directly remember tribal life before their casino wealth. Across these members' perspectives, variability and subjectivity were noted with regard to what they considered to be 'benefits' and what they considered to be 'costs'.

Research Question Three: How are the costs and benefits of conservation banking in California distributed amongst nonhumans?

Analysis in Chapter Seven concluded that the state's mandating of a preferential conservation focus on endangered-listed species, combined with the influence of species' charisma, help explain why species falling into these sub-groups are often disproportionately more likely to be protected by conservation banking in California. Broader ecologies may then receive relatively less attention, even though some California environmental agencies increasingly acknowledge that these are important to protecting and balancing true biodiversity. Additionally, and similar to the above paragraph regarding paradox, this analysis showed that the charismatic and/or endangered-listed nonhumans who seem favored for some benefits may paradoxically also experience costs tied closely to those benefits. Chapter Seven finds, for example, that those charismatic species may undergo a commodification that treats them as fungible, mobile, and exploitable abstractions and affective laborers, leading to 'a-territorial' displacement from their origins and 'a-temporal' separation from their evolutionary timelines.

In fact, California's approach to governance of conservation banking sometimes rewards such commodification and abstraction of nonhuman nature through increasing the viability and competitive advantage for conservation bankers who engage more in such actions. The analysis in Chapter Seven found that this may manifest through conservation bankers' behaviors to cultivate or preserve favor with the public and the state. Through greenwashing, commodifying charismatic species, and generating an appealing conservation narrative, the conservation bankers may divert attention from the fact that their biodiversity support is sometimes suboptimal and inequitable.

8.2 Contributions

Environmentalism has been a subject of geographical and related literature ever since the nineteenth century (see Marsh, 1864; Muir, 1912; Thoreau, 1839). Subsequent scholarship undertaken on market environmentalism and biodiversity banking began appearing in the late 20th century, and proliferating in the early 21st century. Key topics marking the evolution of study along the latter portion of this continuum have included the neoliberalization of nature, market-based mechanisms for conservation, and biodiversity offsetting (e.g. Heynen and Robbins, 2005). More recently, scholarship has focused in even more specifically on the individual forms that market-based conservation can take, including conservation banking (e.g. Boisvert, 2015; Gamarra et al., 2017; Grimm, 2021; Mead, 2012), and I have drawn upon such work.

However, this thesis has highlighted how the scholarly understanding of conservation banking could benefit from further refinement, to be discussed less generically and with more consciousness of the granular geographical variations in how it is implemented and governed, and in how its benefits (and costs) are distributed amongst context-specific stakeholders. My examination of the evolution of California's conservation banking governance has not only shown how it is fairly unique to California, but has also provided the historical background to help explain why it remains so endangered species-centered. That history links California's growth of the largest conservation banking program in the U.S. to the state's need to reconcile ambitious economic development with requirements to comply with the *Endangered Species Act*.

This thesis has also opened up discourse that shifts some emphasis from conservation banking's theoretical market and credits aspects over to how conservation banking is conducted in day-to-day practice, as well as to who it affects and how. This has in no way meant to suggest that the credit market is not important to conservation banking; credits and the market to transact them

are foundational to the model's concept. However, I have contributed the perspective that a critique of conservation banking in California finds other issues also at work which are at least as interesting and probably more consequential than the fact that a market is involved. Dempsey (2016) has argued that the role of the 'market' in market-based conservation is sometimes overestimated; I contend that other elements I have focused on in this thesis have so far been underestimated.

Consequently, I have underscored the need for conservation banking literature to be more reflective of the diversified benefit streams conservation bankers derive in a neoliberal political economy like that of California. Existing literature on conservation banking, especially that which is critical, frequently focuses on the sale of conservation credits as the way through which bank owners benefit. However, I have illustrated through my case studies analyses that bank owners actually derive diversified economic, social, and cultural value as defined by Bourdieu (1983, 1987), that is more valuable than credit sales. This truth contributes to better understanding of what motivates conservation bankers in California to participate, and further puts into accurate perspective the limited role of market credits in the bigger picture of conservation banking.

I have also highlighted that more attention is warranted regarding the socio-political ways in which species' charisma, affect, and commodification influence the implementation and governance of conservation banking, in terms of which natures are prioritized and why. Engaging with a political ecology framework to build on the previous work in nonhuman charisma and affective labor of Barua (2017, 2019), Collard and Dempsey (2013), and Lorimer (2007, 2009), I have contributed unique insight about how these factor into the context of conservation banking. I have shown that a major driver of benefit inequities is the employment of species' charisma and affective labor by conservation bankers, as well as by the state itself, to legitimize the conservation banking program and the diverse (and often controversial) peripheral benefits bankers derive from their involvement in it.

In particular, by focusing specifically on conservation banking *in California* to analyze how different groups benefit to an inequitable degree, I have shown that these inequities are dramatic enough to support positing that the state's program requires policy interventions. For nonhumans, I have shown that the commodification and abstraction involved often renders them a-territorial, and a-temporal. For humans, the privatization of nature and its conservation renders many stakeholders the victims of exclosure, in that they have lost access to natural resources which were once freely available to them. Consequently, although the program has merit, it is in need of reforms such as those I recommend below in Section 8.3 to reduce the risk of doing more net harm than good.

Lastly, while the existing political ecology literature has often found the combination of indigenous groups and enclosure of land as protected areas to produce negative outcomes (e.g. Beitl, 2012; Rai et al., 2019), I have shown through a case study combining green neoliberalism with an indigenous American tribe's entrée into conservation banking that positive outcomes can result. I demonstrate that the Agua Caliente Tribe benefits from apparent decolonization effects through its involvement with conservation banking, such as diversified capital accumulation, improved food security, and the increased capacity to develop and share decolonizing artistic expression. Yet paradoxically, part of the contribution I also make comes through consideration of how these 'benefits' and apparent 'successes' are defined according to a capitalist (even colonial) perspective, and are at least partially produced through the Tribe's assimilation of capitalist behaviors.

The extent to which a conservation bank in California engages with and impacts surrounding human geographies is striking; it is hoped that through prompting further discourse and critical evaluation of California's conservation banking policy, increased consideration of a more equitable distribution of benefits across all stakeholders might become the norm in conservation bank

planning. Consequently, I next turn to looking at how conservation banking in California might be improved, through policy changes and rethinking of priorities.

8.3 Policy Implications and Recommendations

The following recommendations were developed with input from interviewees, particularly staff of the governance agencies, and conservation bankers. Their input was compared and coordinated with my own fieldwork learnings and observations, and I also have drawn upon previous work from Bunn et al. (2013), Rea (2017), and White et al. (2021). With the exception of Bunn et al. (2013), these authors do not directly offer recommendations for reforming California's conservation banking policy. However, they provide valuable insights that do inform potential recommendations.

Underlying these recommendations are concerns for addressing inequities involving both humans and nonhumans, and recognition that the quality of long-term conservation approaches and techniques is variable among conservation bankers in California. Also considered are directions California's conservation banking policies could take to more effectively incentivize supporting broader biodiversity and ecosystems. These issues came to the forefront based on having answered my research questions:

1. Improve the clarity, accountability, and enforceability of conservation bank standards and requirements, by converting them from their current form existing mostly of program *guidelines* and contractual agreement language, into legislated policies (Interviews, 2018; Bunn et al., 2013; White et al., 2021). Some application criteria for establishing *new* conservation banks was finally made into law *SB 1148* in 2013 (White, 2013). However, California's current guidelines for *ongoing* conservation bank management have limited

standardization and enforceability, because they are largely intended as language in communications materials and in contracts between conservation bank owners and governance agencies including the California Department of Fish and Wildlife (CDFW). Their legal standardization would reduce the possibility that different conservation bankers, such as those with more political influence, may be held to different standards of conservation management quality or practices.

2. Reallocate some funding resources from reactive hunting and fishing enforcement over to support having more wildlife agency coordinators dedicated specifically to proactive conservation banking governance; this would enable more emphasis to be focused on monitoring and evaluation of ongoing conservation management over time (Interviews, 2018; Bunn et al., 2013; Gamarra and Toombs, 2017; White et al., 2021). Currently, most of California's wildlife agency human resources are focused on hunting and fishing regulation; there are barely enough agency staff focused on conservation banking to cover the scrutiny of new bank applications, let alone the long-term monitoring. The current ratio of CDFW staff dedicated to conservation banking versus wardens dedicated to fishing and hunting regulation being 2:380 speaks volumes about the agency's relative prioritization of each department in terms of resource allocation. More agency staff allocated to conservation banking would enable more direct rigor regarding ongoing monitoring and evaluation follow up, beyond the current annual self-reporting requirement for banks to document species counts and geography-specific indicators such as water depth or grass thatch thickness.

3. The California Department of Fish and Wildlife's Natural Community Conservation Planning (NCCP) program should take a more participatory role in governance of the conservation banking program, as the NCCP increasingly has an ecosystem focus that is largely lacking in many conservation bank activities in California. Bunn et al. (2013) find that the

NCCP program is so lacking in human and other resources that it would currently require five to ten years of analyses in order to complete the checks needed to approve a single conservation bank plan;[62] this makes it as yet impractical to include the NCCP in most conservation bank governance processes.

4. California should reduce the financial barriers to entry (into the conservation banking program) in order to democratize the conservation bank approval process. Currently, conservation bank policy requires applicants to pay a large, non-refundable application fee to the state, as well as hire land use and environmental professionals to determine and attest to numerous facts about the suitability of the land site in question (White, 2013). Some private land owners who have habitat and/or species on their land that are valuable to biodiversity might currently be prevented from participating in the conservation banking sector if they are not wealthy enough to incur all of the initial application expenses. Neoliberal shifting of such responsibilities onto private citizens using processes that only wealthy elites can afford to participate in consolidates most of the benefits (such as property tax exemptions) further into the hands of that small elite group. This is especially unfair given that some financial costs of operating the conservation banking program are distributed amongst taxpayers who cannot afford to directly participate in that program. There is precedent elsewhere for low entry barriers; in Midwestern U.S. states, the U.S. Fish and Wildlife Service processes conservation and mitigation bank applications at no cost to farmers for involvement of their agricultural land (U.S. Department of Agriculture, 2020).

5. California should not only continue the conservation banking program, but should keep building on its strengths. While the critical analysis in which I have engaged throughout this

[62] The reason given was that analysis of an entire ecosystem is more complicated than confirming the presence and habitat for a particular species (Interview, 2018).

thesis unearths a number of concerns facing the state's conservation banking program, and presents with honesty some of its unflattering realities, the program has some valuable aims and qualities. It has demonstrated a strong capacity to act as a forerunner in what was an undeveloped niche of the U.S. conservation sector (Thompson, 2005). It has also shown an ability to scale up rapidly and engage a large number committed participants (Mann and Absher, 2014). These strengths can be expanded upon if the program's policies emphasize its innovative and holistic side with an eye toward conserving inclusive ecologies and incorporating a more functionalist, ecosystem services approach. De-emphasizing its narrower policies and philosophical practices that are based in historical tradition but that are no longer relevant or optimal would enable California serving as stronger role model for the sector.

8.4 Potential Limitations in this Research

As with the majority of studies, the design of this research was subject to limitations, and I briefly reflect on two below to ensure the research findings and conclusions are placed in context.

First, being the lone researcher as well as one with a physical disability, it would not have been feasible in terms of time and logistics for me to conduct in-person visits to every single one of the many conservation banks in California. I nevertheless visited a large, representative group of them. As described in Chapter Three, I also compensated somewhat for this sample size limitation through who was included in the interviewee group, as well as through the strategic selection of the banks which I did visit. Nevertheless, I acknowledge that this limitation theoretically leaves the findings open to some possibility of missed opportunities that might have come about through additional on-site discoveries.

Second, the component of indigeneity in Chapter Six's case study added an extra layer of challenge to the data collection—especially via interviews—in terms of the need to approach them with appropriate cultural sensitivity while not unduly hampering my ability to cultivate information. To help navigate this, I followed relevant cultural sensitivity guidelines in the literature (e.g. Burnette et al., 2014). Nevertheless, I acknowledge observing my own interview approach as leaning toward the *very* cautious in some such contexts, which had the potential to influence the productivity of this data collection method.

8.5 Potential Further Research

With all of the research that has already been undertaken in market-based conservation, it may be surprising but is nevertheless the case that there are aspects of conservation banking in California that remain ripe for further research. I focus on two that became particularly apparent during the course of undertaking this thesis.

Program Results Review

California's conservation banking program began in 1995 when it approved its first bank. My review of the conservation bank establishment date records across the 26 years since finds that most of the banks were approved within the program's first 15 years (CDFW Habitat Conservation Planning Branch, 2018). Consequently, enough time has passed that a comprehensive, external[63], and published examination of the program's results—showing successes, failures, and learnings—would seem both feasible and valuable to informing the future direction of the program, as well as sharing learnings from which other conservation banking programs can benefit. Given all the

[63] The California Department of Fish and Wildlife does review conservation banks' reported results, but has not released a comprehensive analysis of the results publicly.

resources and land that have been invested in the program, as well as all the human and nonhuman costs incurred which have been illuminated through this thesis as well as the previous research it has drawn upon, it seems time that an honest appraisal of how well the program is actually safeguarding biodiversity is in order.

The closest existing research of this kind is Gamarra and Toombs' (2017) "Thirty years of species conservation banking in the US: Comparing policy to practice." However, this deals not with results achieved, so much as it deals with comparing the evolution of implementation methods against the original recommended implementation guidelines. This research also problematically lumps multiple neoliberal conservation models like conservation banking and wetland mitigation banking together; a 'thirty-year review' of conservation banking wouldn't actually be possible until 2025. Finally, as my thesis has shown, the California conservation banking model is distinct and would consequently be best studied separately rather than lumped with the rest of the U.S., so as not to compare apples with oranges.

The Influence of Gender in Conservation Banking

The gendered character of governance agencies and frameworks for conservation banking in California has been touched on briefly in my thesis, but fuller treatment of it would have been beyond the scope of this research. Human resources dedicated to conservation governance in California are significantly masculinized [see for example Figure 52]. This is an intriguing and concerning dynamic, both in terms of the possible causative reasons behind it, as well as the possible ways it may influence the activity and outcomes of the programs it touches. There have been studies examining the gendered, patriarchal tendencies in American law enforcement (e.g. Batton and Wright, 2019; Bradway, 2018; Schuck, 2017), and the California Department of Fish and Wildlife is indeed considered a law enforcement agency. There have also been studies and discourse

looking at gender issues in environmentalism (e.g. Maleta, 2019; Norgaard, 2005; Okopny, 2015), but research has not specifically focused on gender in Californian or even American environmental governance.



Figure 52. 2018 graduates of the California Department of Fish and Wildlife Academy for Wildlife Officers, in which there was one female graduate. Photo used by permission courtesy of the California Department of Fish and Wildlife.

Such research could also draw upon links to the closely-related militarization and continued patriarchal references to game hunter legacies such as that of Theodore Roosevelt, whose military uniform remains the inspiration for the uniforms worn by senior-ranking staff of the California Department of Fish and Wildlife [see Figure 52 and Figure 53]. The department's logo (blue flag) remains a hunting gun and a fishing pole.



Figure 53. Theodore Roosevelt in his iconic military uniform. Photo courtesy of the Theodore Roosevelt Association.

Final Reflections

This thesis is the product of hundreds of hours of dialogue with stakeholders in California's environmental conservation governance agencies, conservation banks, local populations in the San Joaquin and Coachella Valleys, and nongovernmental conservation organizations in California. I have

made every effort to accurately and sensitively reflect the relevant realities of the individuals I met in the course of undertaking this research, as well as trying to accurately engage with the scholarship upon which I draw. Some of the individuals who benefit less from the case study conservation banks presented in this thesis face struggles in their lives, and through my experience as a researcher working amongst them I have in particular gained increased respect for the sensitivity with which geography and political ecology scholarship can act when examining such struggles.

I have also learned that sometimes a researcher might find that engagement with existing literature and with on-the-ground fieldwork requires not only open-mindedness, but courage, such as when some fieldwork learnings challenge aspects of what has been previously presented in the existing scholarship. This has required a maturation of how I perceive engagement with scholarship, and with fieldwork experiences and findings. Specifically, when I found some elements in my own fieldwork experience that did not match perfectly with findings of previous authors, I needed to courageously say so, while also recognizing that this is not a matter of 'right' or 'wrong' but rather a matter of interpretations, foci, and encounters. Indeed, I came to see these bits of incongruity or openings in knowledge as some of the best opportunities for making a contribution to the literature.

Lastly, incongruences, conflicting foci, and competing goals are seemingly a part of conservation. In California, climate change is pushing a more intense focus onto large-scale fires. Very often, the areas most prone to burning are those adjacent to or directly on land areas that are protected and conserved (Calhoun et al., 2020). The state's capitalist land development machine has also rapidly replaced previous open spaces with concrete and structures. Human Californians see the protected areas of conservation banks as among the last natural area options (Brennan, 2019; Thompson, 2008). This thesis assumes that the interest of nature and biodiversity preservation probably outweighs human costs of using conservation banking as a method of achieving that, if it

successfully does so. However, having opened discourse on the human and nonhuman benefits and costs, I invite each reader to weigh the balance of such considerations themselves.

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APPENDIX 1: LIST OF INTERVIEWEES

Date(s)	Location	Role/Title/Affiliation	ID (Initials)	Interview #
26/03/2018	Sacramento, CDFW government office	Coordinator, Habitat Conservation Planning Branch, CDFW	BR	1
02/04/2018	Sacramento, CDFW government office	Regional Coordinator, California Department of Fish and Wildlife	GE	2
02/04/2018	Sacramento, CDFW government office	Regional Coordinator, California Department of Fish and Wildlife	KT	3
04/04/2018	Sacramento	Executive Director, Califorina Fish and Game Division	CB	4
06/04/2018	Sacramento, Office of the Governor	Deputy Chief, California Governor's Tribal Advisor Office	CS	5
09/04/2018	Sacramento Cal/EPA building	Undersecretary, California Evironmental Protection Agency	SM	6
09/04/2018	Sacramento, HQ office	Historian, Department of Water Resources	KN	7
11/04/2018	Sacramento, CDFW government office	Senior Wildlife (Field) Officer, California Department of Fish and Wilc	AL	8
11/04/2018	Sacramento, CDFW government office	Senior Wildlife (Field) Officer, California Department of Fish and Wilc	BS	9
11/04/2018	Sacramento, CDFW government office	Senior Wildlife (Field) Officer, California Department of Fish and Wilc	MB	10
12/04/2018	Sacramento, bank grounds	Bank Manager, Bryte Ranch Conservation Bank	DN	11
13/04/2018	Sacramento, HQ office	President, Public Policy Institute of California	MB	12
16/04/2018	Bakersfield	Field Supervisor, Kern Water Bank Authority Conservation Bank	SY	13
16/04/2018	Bakersfield, HQ office; bank tour	Bank Manager, Kern Water Bank Authority Conservation Bank	NT	14
16/04/2018	Bakersfield, HQ office; bank tour	Field Assistant I, Kern Water Bank Authority Conservation Bank	SH	15
16/04/2018	Bakersfield, HQ office; bank tour	Field Assistant III, Kern Water Bank Authority Conservation Bank	JL	16
17/04/2018	Yolo, bank grounds	Bank Manager, Pope Ranch Conservation Bank	TT	17
19/04/2018	Placerville, office	GIS Manager, Orchard Creek Conservation Bank	SA	18
20/04/2018	Colusa County, bank grounds	Bank Manager, Dolan Ranch Conservation Bank	DE	19
20/04/2018	Berkeley	Professor of History, University of California-Berkeley	GB	20
22/04/2018	Oakland, office	Attorney, Center for Biological Diversity	AK	21
23/04/2018	Wasco, employee lounge	Manager, Lester Neufeld & Son Farm	LN	22
23/04/2018	Bakersfield	Co-Owner, Wheeler Farms	MW	23
23/04/2018	Lost Hills, McDonalds restaurant	Lost Hills Resident, agriculture worker, pistachios, almonds	C	24
22/04/2018	Lost Hills, McDonalds restaurant	Lost Hills Resident, agriculture worker, citrus orchards	Ri	25
22/04/2018	Lost Hills RV Park	Lost Hills Resident, agriculture worker, citrus orchards	A	26
22/04/2018	Lost Hills RV Park	Lost Hills Resident, agriculture worker, packing warehouse	R	27
22/04/2018	Lost Hills RV Park	Lost Hills Resident, oil field worker	E	28
21/04/2018	Lost Hills Guttierez Tire	Lost Hills Resident, clerical worker,	W	29
20/04/2018	Sonora	Tuolomne MeWuk Tribe Member	L	30
20/04/2018	Sonora	Tuolomne MeWuk Tribe Member	P	31
23/04/2018	Sutter County, bank laboratory, grounds	Biologist, Sutter Basin Conservation Bank	JP	32
24/04/2018	Stockton, HQ office	Executive Director, Restore the Delta (Organization)	BB-P	33
25/04/2018	Alameda County	Bank Manager, Ohlone West Conservation Bank	VH	34
27/04/2018	Placer County	Bank Manager, Big Gun Conservation Bank	BL	35
06/05/2018	Sacramento, H Street office	Program Manager, California Rangeland Trust	NS	36
06/05/2018	Palo Alto	Conservation Project Manager, Peninsula Open Space Trust	TE	37
07/05/2018	Santa Barbara, office	CEO, California Water Impact Network	CK	38
09/05/2018	Agua Caliente Reservation	Tribal Ranger, Agua Caliente Tribal Conservation Bank	AR	39
09/05/2018	Palm Springs	Hositality Coordinator, Agua Caliente Casino	K	40
15/05/2018	Los Angeles, home office	Co-Owner, Kern Water Bank Authority	SR	41
18/05/2018	Palm Springs, Tribal office	Vice Chairman, Agua Caliente Cahuilla Tribal Council	LO	42
21/05/2018	Palm Springs	Non-indigenous Palm Springs Resident	WM	43
21/05/2018	Palm Springs	Non-indigenous Palm Springs Resident	Pl	44
23/05/2018	Palm Springs	Non-indigenous Palm Springs Resident	At	45
23/05/2018	Palm Springs	Non-indigenous Palm Springs Resident	M	46

APPENDIX 1: LIST OF INTERVIEWEES (CONTINUED)

Date(s)	Location	Role/Title/Affiliation	ID (Initials	Interview #
24/05/2018	Palm Desert, Store Showroom	Non-indigenous Palm Springs Business Owner	Q	47
25/05/2018	via Telephone	Regional Case Manager, Bureau of Indian Affairs	ED	48
25/05/2018	Palm Springs, Exxon refinery office	Social Responsibility Officer, ExxonMobil	BT	49
25/05/2018	Palm Springs	Non-indigenous Palm Springs Business Owner	Ax	50
26/05/2018	Palm Springs Golf and Tennis Club	Non-indigenous Palm Springs Business Owner	Av	51
28/05/2018	Palm Springs, public education route	Tribal Ranger, Agua Caliente Tribal Conservation Bank	AG	52
28/05/2018	Palm Springs City Hall	Non-indigenous Palm Springs City Council Member	MU	53
28/05/2018	Palm Springs City Hall	Palm Springs Assistant City Planner	NK	54
28/05/2018	Palm Springs City Hall	Palm Springs Deputy City Clerk	AM	55
29/05/2018	Cathedral City	Coachella Valley Resident	N	56
29/05/2018	Cathedral City	Coachella Valley Resident	T	57
29/05/2018	Cathedral City	Coachella Valley Resident	B	58
29/05/2018	Cathedral City	Coachella Valley Resident	Mn	59
31/05/2018	Riverside County Government Building	County Supervisor	Llm	60
01/06/2018	Palm Springs, Tribal office	Bank Management Consultant, Agua Caliente Tribal Conservation Ba	EC	61

APPENDIX 2: PARTICIPANT CONSENT FORM

UNIVERSITY OF OXFORD SCHOOL OF GEOGRAPHY AND THE ENVIRONMENT
South Parks Road
Oxford OX1 3QY

Gregory Anderson
DPhil Candidate
Telephone number: 310 584 7329
Email:
Gregory.Anderson@seh.ox.ac.uk

PARTICIPANT CONSENT FORM

CUREC Approval Reference:

Conservation Banking in California: Uneven Dividends

Purpose of Study: To improve understanding of what conservation banking in California is, how it functions, from where it originated, who it benefits, and why.

		Please initial each box
1	I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without any adverse consequences or penalty.	☐
3	I understand that research data collected during the study may be looked at by designated individuals from the University of Oxford where it is relevant to my taking part in this study. I give permission for these individuals to access my data.	☐
4	I understand that this project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.	☐
5	I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.	☐
6	I understand how this research will be written up and published.	☐
7	I understand how to raise a concern or make a complaint.	☐
12	I give permission to be quoted directly in the research publication. I understand that if I do not expressly agree to be quoted, no identifying information regarding me will be included in the research findings.	☐
13	I agree to take part in the study.	☐

Name of Participant	Date	Signature
Name of person taking consent	Date	Signature