

LEVEE STORIES FOR AN EXPEDITED RECONNAISSANCE STUDY

By

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ABSTRACT

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The coordination of earthen levees in Humboldt County, California known as the Redwood Creek Flood Control Project holds mistakes within its design and composition. The United States Army Corps of Engineers (USACE) admitted in studies conducted after the sculpture's completion in 1968 that the levees extended too far into the creek's estuary and this overreach has yet to be corrected. Poorly negotiated allowances of the levees into the transition zone caused the circulation of the vital water vein to compromise proper supportive nourishment for ecologic health. Economies such as fishing, farming, education and tourism surrounding the waterway have also suffered. Other complexities involved with the levees transmogrify several broader plots of development found thru the arrangements of actions. This research project used ethnographic methods to gather different lines of narrative around the flood control project to advocate for change. In directing an analysis of the heteroglossia assembled with supportive multimodal anthropology, the objective was to reveal the stratagems of the levee system observed as an *oeuvre* thru its stories that, woven together, compose the significance of the edifice. With this accomplished, the agencies involved can efficiently assign the task of remediation. Methodological triangulation indicated poisonous Lead

(Pb) might remain within the ground of the public work. There is a need for these stories to be communicated and for additional investigations to promptly happen for the community. A thesis project website titled leveestories.xyz was provisioned for the future of this United Nations World Heritage watershed.

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INTRODUCTION

In Orick, part of remote Humboldt County California, many past and current ranchers, farmers, and residents use the term *levee* to describe the engineered structure left by the United States Army Corps of Engineers (USACE) in 1968. The Yurok People, an indigenous group in the region, also use levee to describe the formation. The USACE (plus county, state and federal agencies) may also reference the work as the levee or levees. When used as a noun the term levee means an embankment built to prevent the overflow of a waterway. Officially, however, the title Redwood Creek Flood Control Project Humboldt County (RCFCP-HC) is used when referring to the coordination of these earthen walls that remain in Orick. (DEH, 2014; Yurok Language Project, 2017; USACE, 2017; Oxford University Press, 2017; Levee Myths and Facts, 2017)

In this thesis, I treat the RCFCP-HC as an *oeuvre* (a work of art) with the disparities and coordination of its plots while listening to everyday storytelling, practicing participant observation and within the textual research. And as I start to uncover and explain, the RCFCP-HC, observed as an oeuvre has even greater theater taking place than might first appear (Hall, 2017). Therefore, the difference between the terms used in describing the earthen walls are necessary to account for, so there is no confusion when explaining this edifice as an artwork (a sculpture being both physical and perceptual). The levee system, the levees, plus any other informal terms used to label the public work refer to the same place as the RCFCP-HC. The various names, while speaking of the

same object and subject, begin to distinguish the different telling of its stories by storytellers (2017, Rapport, 2017; von Benda-Beckmann, 2017).

By research I locate the object and subject of my investigation, then by responding to the terrain as being a public artwork at various levels of frequencies (or tiers), I begin to interpret its placement in the cosmos and why it exists. When understanding the much larger scope of this public work as an artwork, I utilize the colloquialism of a levee to allow for more lightheartedness in focusing on the particular familiarities of the stories it creates. This new range of levee stories grow into the focus of my research within Orick and starts to reveal broader plots. These more expansive plots (or stratagems) add to other complexities of the levees and help to establish the contents of stories that weave together throughout this thesis (Snowden, 2015; Rapport, 2017; von Benda-Beckmann, 2017).

The context of the levee stories consequently supports our meta-plot as anthropologists, which is, allowing the curative nature of the universe to occur by change, specifically that of our earth for humans as human (Rapport, 2017; von Benda-Beckmann, 2017). As will be observed, change is needed presently for the levees, the Redwood Creek estuary in Humboldt County and its community. So conversely, the RCFCP-HC, with a more complicated and bureaucratic spirit holds more representation of responsibility, or lack thereof, towards this meta-plot. The meta-plot includes a cast of characters on parade, all part of what I call the levees' *Management Theater*, (which I will explain under the section titled, *Location*) involved with the RCFCP-HC in Orick.

Hence, RCFCP-HC, in addition to encompassing the earth of the public work, also embraces and communicates stories, and is where I begin.

Stories are an ancient exercise utilized by humans that can assist with instructions for direction known as education thru language. This education is necessary at times to help with understanding where one has been, is, or where they may be going. Use of language can be wide-ranging and various in its formation, its information and its presentation towards communication (von Benda-Beckmann, 2017; Corballis, 2017; Ellis, 2017; Fleming, 2013). The language I have chosen to utilize for my thesis project is that of art which, ultimately, I structured into a descriptive formulaic and scientific website.

Levee stories, varying in length and plots, converse the experience concerning the RCFCP-HC and includes a dialectology plus natural, factual and imaginative development. This development additionally accounts for its current state of deterioration. When describing this dialectology (and the more) summary of the levees, the term *heteroglossia* will be used and comes into play when delving into the differences and meanings of these levee stories. (Corballis, 2017; Ellis, 2017; Carlile, 2013; Milton, 2013; David and Thomas, 2016; Cooper, 2015; Göthe, Timmermann, Januschke, and Baattrup-Pedersen, 2016). Heteroglossia, in Greek, means hetero- "different" and glōssa "tongue." The term is a translation from the Russian term разноречие (pronounced *raznorechie*) introduced to me in the work of Mikhail Bakhtin (Bakhtin, 2010).

Bakhtin is a linguist from the 20th-century (November 17, 1895- March 7, 1975). Bakhtin describes the concept of *raznorechie* in his essay, *Discourse and the Novel*,

saying that the evolved idea of heteroglossia is the coexistence of at least two points of view (or perspectives) for an artwork (a shared reality) which takes place in dialogues about its creation. In analyzing heteroglossia, the listener then needs to circumnavigate the information to determine and interpret the significance of the representation given to know its worth (Bakhtin, 2010; Barry, 2017). I also utilize this within the dialogue (or text) of my thesis to engage the readers into the circumnavigation of its contents for improved understanding towards context.

With dialogue also being an ancient form of mind training, another example for the meaning of heteroglossia is believed to come from the philosopher Laozi (Stanford Encyclopedia of Philosophy, 2017). Laozi (though debated is the authorship of this ancient I Ching text) described the circumnavigation as our life and death being one thread (our actuality), the same (reality) though viewed from different sides (i.e. the viewpoints we observe and interpret for artworks or creation). The thought itself communicates the diversity of the quest I undertook with my heteroglossia analysis: What are the authenticities portrayed by these levee stories and what truths lie within? Viewpoints, intentions, and history all come to light when discovering the tales and plots of the levee stories (2017; Lu, 2017; McKenna, 1993; Bakhtin and Gratchev, 2016; Bartley, 2016; Cutchins, 2017; Öhman, 2017; Kang and Rawlins, 2017).

This variance of viewpoints begins with the official and unique histories for the RCFCP-HC. Manufactured in the 20th century, the RCFCP-HC is one of many infrastructure projects which remain throughout the United States from this time era. Multiple conceptual designs for flood control projects were imagined and built by the

United States before these particular plans arrived in Humboldt County. Flood Control projects were enterprises undertaken by the Corps and local governments to help return troops from post-World Wars into the domestic labor force (Knight and Rummel, 2014; History of Levees, 2014). In fact, the RCFCP-HC is just one of three flood control projects the Corps built during this period for Humboldt County, including one in Fortuna, California and one in Blue Lake, California. Being stated in reports at various degrees of importance, a series of floods, social and political motivations including expansion of people coming to the area, were why the Army Corps of Engineers produced these and the RCFCP-HC (2014; 2014; DEH 2014; Spence, 2011).

With the grander perspective of observing the levees holistically as an artwork manifested into actuality (I will continue to clarify why the RCFCP-HC is a shared reality, or an Artwork, in the following sections) the levels that it factors will begin to emerge. The levees are susceptible to factors that all art would be. These factors, as concentrations I label as levels in the material called tiers, include elements which correspond to time, conversation and maintenance. Various other biological and cultural components within the layers can also change both the earth sculpture and the conditions, attitudes, and ethos that the creation carries (Göthe, Timmermann, Januschke, and Baattrup-Pedersen, 2016; Carlile, 2013; Milton, 2013; David and Thomas, 2016; Cooper, 2015). So, to find the changing and assorted importance of the RCFCP-HC, we observe first its official histories given by agencies.

Official Histories

In the 1960s the County of Humboldt Board of Supervisor's vote was unanimous to become the sponsor of the RCFCP-HC, and in so doing, became legally required to support the levees as public art in Orick, California. At that time, the community of Orick was grateful to receive the art communiqué within the conception of a superfluous military philological frame to assist with the protection of their dairy cattle and working lifestyles. Today, the County of Humboldt Public Works Environmental Services Water Management; which lacks resources, ability, and funding to care for the public artwork, is the current area sponsor of the RCFCP-HC (Meeks, 2017; Epstein and Zastavker, 2017; DEH, 2014).

On December 31, 2014, the water management division received a grant from the California Department of Fish and Wildlife in which they proposed a conceptual project design report for the levee system titled Redwood Creek Estuary Restoration and Levee Rehabilitation Conceptual Design Report Orick, Humboldt County, California. The report was 205 pages in length, and the narrative it presents is that the edifice of the RCFCP-HC holds an admitted mistake in its original design and construction performed by USACE. The levee system's measurements were too large for its application into the site location of Orick. The error has caused extreme damage to area environs including those of endangered salmon populations. The western end of the levees extends too far into the creek's estuary where the overreach weakens the natural connection of the stream to the Pacific Ocean and compromises the spawning beds of these fish. As a result, the

consequence of the levee system error is both ecologic and economic (DEH, 2014; Blumm, 2017; May, 2014; Mathevet, Thompson, Folke, and Chapin, 2016).

A general investigation, called a reconnaissance study by the Corps, is being sought by multiple area agencies and congressional members as a product of this construction error, but largely to no avail. An observational study needs to be performed, first, by the USACE before any further action to correct the flaw can take place as it is the only known option by law that will aid in addressing the concerns with the levee system. With the law, U.S. Code, Title 33 Navigation and Navigable Waters § 208.10 for local flood protection work; the County of Humboldt approved maintenance and operation of structures and facilities without fully understanding the scope of the agreement. The policy is vague and limited as to what the sponsoring community should and can do for the open and multifaceted RCFCP-HC's case (DEH, 2014; Mulroy, 2017; Knight and Rummel, 2014).

Additionally, agencies and various members of the community have written numerous reports about the conditions of the levees and the surrounding area. These writings craft the histories for the RCFCP-HC each a little different in focus (DEH, 2014; NOAA, 2015; FEMA, 2016, etc., See Exhibit). All reports, including letters to the Corps from congressional members who represent the region, as well as other agencies, fall short with the many necessary intentions, in their narrative regarding Orick. They neglect the underlying complexity in the case of the RCFCP-HC and at times, appear insensitive towards the physiognomies that the levees have helped to shape the landscape and with

the public (Milton, 2013; Nampoothiri, 2017; Senge, 2016). The insensitivity divides the public understanding of what the levee system needs.

Assessment of the Expedited Need

To help accomplish the task of remediation, not only for the levees but also the community, and to advocate for change to happen within the narratives for the RCFCP-HC, undertaken was the following thesis project. Using various ethnographic methods, including participant observation, I collected various lines of narrative from different contributors for analysis of the RCFCP-HC. The collection and studies were done to formulate the stories as results that comprise the levee system. Moreover, why the RCFCP-HC is significant was the empirical scientific method question I used for the experiment conducted. With this empirical question forming as complicated answers as it does, the results, which are all levee stories herein, assist in public understanding of the different significances the RCFCP-HC, as an artwork, conveys. (Spradley, 2016; Larsen-Freeman and Cameron, 2008; Little, 2016; Thurs, 2015)

From various approaches of observation, I found and verbally had confirmed, that Lead (Pb) reportedly contaminated the soil near the local elementary school in Orick during the time of the removal of the old truss bridge that crossed over the creek and levees. The detail, though remembered by many of the elders in the community of Orick, had not been previously recounted in agencies' reports. Ethically a causal study is needed to determine health impacts of the activity and to address the conflicting accounts from agency officials who removed the bridge and the lifelong Orick residents as to where the

soil went. The remains of the bridge should be known before the USACE is to perform any work. (McElroy and Townsend, 2014; McCarthy and Burke, 2017; Kappes and Crockett, 2016).

In understanding my role concerning the RCFCP-HC, I manifested a digital website titled www.leveestories.xyz when I learned and confirmed the information about the removal of the old truss bridge. The site is to help foster an understanding of better approaches towards future work performed within the community involving the RCFCP-HC (Davies and Elder, 2008; Quigley and Lyons, 2017; Kim, 2017; Nolan, 2017). The site serves as a manuscript with interpretive multimodal anthropology as supportive evidence, and a repository of all information I have gathered thus far in association to the RCFCP-HC. Additionally, it holds space for other stories about the levees to continue their expression. The site is needed, so no one is again unnecessarily harmed by not having the information openly available (2005; 2017; 2017).

In making public, the stories told in this thesis and the website, my hope is that the reconnaissance study needed can be expedited. The rush is not only for Orick or specific agencies mentioned within my writings but honorably for a betterment of the collective human experience. The RCFCP-HC lies within the watershed of a United Nations World Heritage site. Therefore, we all hold some stake for the waterways well-being and how these stories turn out (Beissinger, Ackerly, Doremus, and Machlis, 2017; Fleming, 2013). As the subsequent more genuine ethno (meaning folk) history section about the RCFCP-HC given will begin to disclose, the worth of my effort shared goes well beyond that of just the levees and its stories (2013).

Outline of My Efforts

Within the following ethnohistory section, I write specifically about Orick where the RCFCP-HC is on display. I give accounts of stories titled Local Legends of Bones plus other stories about the area populace and its current flux. I explain how levee stories relate directly to American Anthropology and Orick and review briefly, the hot mess the role complexity plays in understanding the significance of the levees. I share my recent familiar history titled Entangled in Orick as it is an additional story about the RCFCP-HC. After this history, I move on to the section titled Location.

In the Location section, I explain Management Theater and the tiers of complexity that the RCFCP-HC is beginning to reveal. I include two interpretations of maps and provide evidence of the dynamics involved with the RCFCP-HC thru the linkage between land use and the selected populations I surveyed. The community of residents and area officials are factors that shaped the direction of my research and the methods I chose to conduct my investigation of the RCFCP-HC.

With the Methods section, I provide my research design and explain the six research methods used to collect and explore the levees. These research methods are, first, the anthropological practice of participant observation documented in two parts: field notes and secondary documents. Next, I explain the survey that I conducted and the practice narratives sessions in which I utilized the tradition of an outside witness for one of the two conferences. Following is a chance meeting (a serendipitous phenomenon) leading to an interview and methodological triangulation. Triangulation is the preferred

technique in the social sciences for providing confidence in interpreted results, such as those from qualitative analyses. My methodological triangulation helped to determine if the research I conducted was successful in finding useful conclusions. This success comes thru the multiple methods used; the knowledge gained can be utilized for a directional course of information surfacing results (Gibbs, 2012). Finally included is an overview of the research supervision for the project.

In place of the standardized thesis results for my project, I have chosen to present stories that emerged from my research, both in the field and in the Humboldt State University Library. Included in the Stories section is an overview of terminology that I applied in my approach towards what is called multimodal anthropology (formerly visual anthropology) by the American Anthropological Association (Collins, Durning, and Gill, 2017). The supportive example I provide showcases how the several multimodal uses on the thesis project site support my work and are also stories within themselves. I then present the story of the Lead (Pb) indication within the levee system. Also, this section includes the blueprint of the thesis website. Finally, I include an example of a storyteller providing an Orick Myth of when the Army came to The Valley after the floods.

I follow the stories with a brief discussion concerning the future land use of The Valley and its possible impacts. These concerns raise the issue of ethics and lead me to provide alternate perspectives and discussion of where changes might enter into agencies' reports that could help the community. I present a request for, and the justification of, an

additional causal study that includes a summary of instructions for the direction of this further research application.

ETHNOHISTORY

Material Tied to the Levees

The material tied to the RCFCP-HC appear more authentically displayed (as an art exhibition) when observing their exchanges with the town of Orick. The levee protects the community of Orick and the national highway that passes through the geological valley. Commonly called *The Valley* by residents, Orick is a standalone community at the western end of the 61.8 miles (99.5 km) Redwood Creek in remote northern California in Humboldt County (DEH, 2014; Rufe and Love, 2011; Save the Redwood League, 2016). Orick is the only public unincorporated town that rests on the banks of the Creek, from the headwaters to the Pacific Ocean. The entire Creek's path that connects to the Ocean thru Orick is also all within Humboldt County's boundaries. If the RCFCP-HC were not a part of the valley, the undercurrents shaping Orick's existence would be drastically different. (2014).

The term Orick is an evolution of the Yurok word O'rekw that translates as the mouth of the river (Golla, 2016). The sound O'rekw itself, researchers have speculated may have come from humans mimicking the noise made by frogs in the area (Barlow, 1985; See Van Kirk Collection at Humboldt Room, 2017). The Yurok People, a community known for their connections to the Klamath River located about 20 miles north, also have history tied to Orick. The contemporary town (and term) of Orick emerged at the turn of the early 20th century as a gateway to virgin old-growth lumber.

Agencies and outsiders often use the term *Gateway* for Orick, such as Orick, a *Gateway to the Parks*. (1985; 2017; Spence, 2011; Save the Redwood League, 2016)

Gateway, however, holds a problematic link to real trauma which happened in this valley (Shepherd, 2015; Schultz, et al., 2016). Generational residents have never accepted Gateway as an appropriate term to describe the area. Many of the past and remaining residents prefer Orick still to be called The Valley (Barlow, 1985; Lara, 2015; DEH, 2014; See Escorting Capital in Survey Answers; See Van Kirk Collection at Humboldt Room, 2017). From my observations, folk stories told with the more endearing title of The Valley by residents also seemed more enjoyable.

The accessibility sought by the gold seekers plus the ranchers, farmers and even some of the Yurok people came with a price. The result of their actions created greater damage to their possessions during regular seasonal flooding. Larger floods in 1950, 1953, 1955, and the most dominant in 1964 created interest in the USACE coming to the area (DEH, 2014). The town's primary summertime activity, the Orick Rodeo, was postponed for three years (1966-1968) for the building of the project to take place. The land for the rodeo known as the Orick Rodeo grounds lies adjacent to the northeastern end of the RCFCP-HC.

The rodeo itself has a multifaceted history with ethical issues but continues as the organizers of the event will tell you, *come hell or high water*. The event usually happens in the middle of July (Barlow, 1985; Rufe and Love, 2011). Use of the land for this purpose (and similar activities) is apparent around the RCFCP-HC. Other known

activities along the levees include ranching, farming, and what appear to be human encampments (See More Complexity and the Parks).

Local Legends of Bones

Orick exists within a natural flood plain. The animal paths and, in turn, indigenous people's trails that once traversed the wilderness area became the U.S. Highway 101 and County roads. Former ancestral villages have been recorded along Orick's coast and in the upper elevations surrounding the valley. Documenting of burial remains from multiple time eras, of various identifiable and some unknown peoples has happened. One story told is referenced in various sources including locally authored books, a collection of newspaper articles and the retelling of such by residents. Described within the story is a discovery of larger than average bones found in the area by the Bureau of Highways now known as the California Department of Transportation (Caltrans). (Thornburgh Map Collection, 1900s-1970; Barlow, 1985; Stanton, Van Kirk, and Hamilton, 1995; Thompson [Che-na-waah Weitch-ah-wah], 1916)

The bigger bones were reported to have been found buried face down. Unburying of these skeletons came with the reroute of the main road through Orick's Lookout Point location. The bones are said to have been quickly reburied in a different location in Orick by workers after the unearthing of them. The event took place in the early 20th century, and the discovery was made well before Native American Graves Protection, and Repatriation Act (NAGPRA) was in place. Never having the precise identification of the bones made, the bones location also is not publicly known. Being infamous among

the legends told by lifelong residents of Orick, many citizens still make a claim they know the larger bones precise whereabouts.

Similarly attractive, as a local story and as a publicly recorded history, a circus elephant that died in route to Orick around this same period has a marker to indicate the animal's grave. But as the anecdote goes, the elephant's hide is said to have been tanned and separated from the frame. The animal's taxidermy rests in a different place than that of its bones. Some residents have claimed that buried together are the hide of this elephant and the bigger bones from the previous account. Others have even said that the skin of the elephant and the larger bones that the Bureau found are in a part of the land near the estuary for Redwood Creek. In any case, both tales are associated to the RCFCP-HC or possibly contained within the actual levees. (Rohde, 1994; Lara, 2015; Barlow, 1985; Stanton, Van Kirk, and Hamilton, 1995; Thompson [Che-na-waah Weitch-ah-wah], 1916).

The Populace and its Contemporary Flux

The town of Orick reported its population in the 2010 census as being 357. The number has decreased almost by half in the last six years, with estimated actual residents, given by the Orick Presbyterian Church (the only remaining church in the area), to be around 183. The overall number of people in the area, however, is often one of flux due to visitors to the nearby Redwood National and State Parks (RNSP). These protected lands surround Orick and include a leased parcel of land within the town limits that holds the Southern Operation Center (SOC) for the RNSP, relatively recently built in 2003. RNSP

employees, the majority of which choose to live outside of Orick, also changes the number of people in (again as how the residents call it) *The Valley* from day to day.

Numerous travelers for a swarm of reasons and multitudes of means are mobile along the US 101 route at any given time. An exact number of people for an actual population is impossible to record. Witnessed homeless encampments along the overgrowth of the levee system additionally create an instability to real numbers. These camps are different from backcountry campsites allowed by the RNSP inside the park farther to the east beyond the levees' boundaries. Deaths also occur within the populace. Sometimes the deaths are directly associated with the dynamics the creek, ocean and the RCFCP-HC forms (Furber, 1956; Spence, 2011; Rose, 2015; See Location).

In Orick's past, the private citizens of The Valley had been documented to have lived to various ages based on a diverse set of circumstances. There are several stories of visitors coming to Orick never to leave. With mild Mediterranean type climate once surrounded by only thick old growth forests, recorded by the United States Census, folks lived well into old age. The ages were often surpassing the national average. In contradiction to these reports are other proclamations in casual conversation by current residents of harmful health conditions such as high blood pressure, headaches, and mood disorders, difficulty with memory and complications with pregnancies. The contradiction leads one to question the validity of either reports or, at the very least, wonder what factors may produce this variance in the residents' experiences (Rohde, 1994; Lara, 2015; Mayo Clinic Staff, 2016).

The Old as well as the New with the Good, the Bad, and the Ugly. Another significant land use history is the route for the United States Highway 101 (US Hwy 101) that traces through this valley. The US Hwy 101 is the only major road joining various access roads for the levee system. The legendary motorway intersects over the RCFCP-HC at the Ralph Miller Bridge. The bridge crosses over the 3.1-mile long RCFCP-HC on Orick's eastern side. The bridge's name comes from Ralph A. Miller who passed on Tuesday, February 20th, in 1996 at 91 years old from complications with a respiratory ailment. He worked designing and planning roads for the State of California for over 40 years, and this bridge named in his honor happened a short time before his death (Thornburgh Map Collection, 1900s-1970s; DEH 2014; Writer, 1996; Auburn Journal Obituaries, 2015).

The concrete Ralph Miller Bridge replaced the former steel truss bridge in the late-1980s. The steel truss bridge replaced a wood one in the late-1920s. The wood bridge dated back to 1905. Before the bridges, and during high floods, a ferry would carry travelers across Redwood Creek, or alternative methods would be used to get across the waterway at this location. (Rohde, 1994; DEH, 2014; Barlow, 1985; Furber, 1956; Cooper, 2015). The reason why I mention the history of the bridges is to understand that altering of the banks of the creek occurred before the RCFCP-HC arrival came to The Valley (1986; 2015).

The intersection of the bridge, because of the history it carries in the landscape, is the principal entrance I used to collect greater information about the RCFCP-HC itself, for my analysis. (David, and Thomas, 2016; Little, 2016; Salgado, 2017) In a satellite

image (see under Location, Figure 3), heading north on US Hwy 101 to the right, just before the bridge is the Orick Elementary School. The school is the only public school in Orick and currently has 17 students enrolled for the 2016-17 school year according to the school's secretary. The school, which faces closure regularly due to low enrollment, has not always had this issue. At the time the levee was built the school had over a hundred students enrolled. Again, multiple factors are involved with the school's roster decline (Furber, 1956; Barlow, 1985; Rufe and Love, 2011; Spence, 2011, DEH, 2014).

The other key factor in the landscape is, of course, the estuary. The estuary is where the creek meets the Pacific Ocean on the western end of the levee. A marker located near the mouth but in the lower southern part of the inlet is the Thomas H. Kuchel Visitor Center for the RNSP. The center's whereabouts is not an ideal spot for the health of the estuary. The center would be inside the passageway of underlying forces involved in a natural transition zone for the creek if it was not already altered and sickened by the RCFCP-HC (Spence, 2011).

Stationed on the remains of an abandoned lumber mill is the Thomas H. Kuchel Visitor Center. The center, built in the late 1970s, was constructed as a quick solution when funds were made available. Out of fear that the coffers would disappear if nothing happened, organizers acted fast to build on the semi-cleared foundation left by the mill (Spence, 2011). The Thomas H. Kuchel Visitor Center is scheduled to close, and a new multimillion-dollar visitor center (plus concessions) will take its place. The new center is to be erected by benefactors to the RNSP (notably Save the Redwood League) on the north-eastern side of the levee system, in a believed different aspect of the town's border.

But the new center will only be at a different position along the RCFCP-HC course and poignantly also on a former mill site location now commonly being called the Orick Mill Site by developers (Save the Redwood League, 2016).

The last truly active maintenance performed on the RCFCP-HC by the Army Corps happened with a readjustment of US Hwy 101 in the late 1980s and early 1990s. The realignment needed more gravel than was available. The clearing of Redwood Creek's pathway of all vegetation provided a solution, and Caltrans used sediment within the water bed for the additional requirements needed for the project (DEH, 2014). It was a collaborative project done with multiple agencies and community involvement. This action was during the period when the removal of the old steel truss bridge crossing over the levees along the US Hwy 101 path happened which I will discuss later in this thesis. The alluvial nature of the creek, it is said, has readjusted itself but the harm from the levees poorly negotiated allowance into the creek's transition zone remains (2014; See Memos from Practice Narratives). This stifling type of injury (what happens to the estuary from the RCFCP-HC) was not able to be accurately labeled as I was not able to discern a name to call what the levees have done. Having been left unattended for over 48 years, the nearest word I found to define this environmental injury is that of a *wound* (Cooper, 2015; Larsen-Freeman and Cameron, 2008; McElroy and Townsend, 2014; Yang, 2016).

American Anthropology and Orick

Orick is where American Anthropology undertook some of its earliest research conducted by the infamous Professor Alfred L. Kroeber and his students. This area in the Pacific Northwest of the United States is fascinating with the rich mixtures of complexity that transformed the wilderness watershed of Redwood Creek, Humboldt County, into agricultural and cattle pastures with surrounding protected State and Federal land, much of which Kroeber proposed (See more stories under Links on the project website). Some residents from Orick that knew Alfred, or of him, still speak fondly in regards to his time spent in The Valley. Area elders have even, on occasion, reported him as being a friend to the families that remain in Orick from those times. However, whether one receives a favorable response when asking about Kroeber is dependent on who has asked about him, why they have asked and to whom they have asked. (Barlow, 1985; Anderson, 2006; Buckley, 2002; Buckley, 1984; Fox and Field, 2007; Lara, 2015; Kroeber and Kroeber 2003)

Kroeber's work in the area is widely controversial due to his heavy-handed classifications and use of particular methods, but the full scale of the value (and cost) of his research is still unknown at this time. Kroeber's findings during his time in the valley showed that culture appears tied to other elements, such as formal history and ethnohistory. He believed that to tell the significance of a subject; an anthropologist must be aware of the subtleties outside of the discipline of anthropology. The connection

shared across disciplines thru all materials and energy was of great fascination to him (Lara, 2015; Fox and Field, 2007; Kroeber and Kroeber, 2003; Senge, 1990).

The attraction that Kroeber found toward the intricacies of culture and biology, plus its transcending patterns into tiers of materials can, in a way, relate to my work in Orick. Observed in Kroeber's work and my own is the model known as complexity involving the interdependence of material and energy and its intra-relation to consciousness. Often very involved to explain, complexity is a type of interest in relationships (or links) that systems create. The links found within my work involve the way that these levees, and the stories they have generated, create the reality of the RCFCP-HC in the culture, as well as the natural history of Orick. The stories that result from these systems of relationships between physical landscape and humanity can be analyzed and interpreted as evidence that supports the need for an expedited study. The links (the systems, reports, policies, etc.) revealed, explained and made accessible through this research can be useful for gaining practical knowledge of the situation in Orick concerning the RCFCP-HC.

Returning to why American Anthropology and Orick is important, the type of connection for an anthropological study that appealed to Kroeber during his time is still observable in Orick thru the relationship between the RCFCP-HC and the people plus the cultural and biological components associated with The Valley. The actors included are the agencies that work within the town, the residents of Orick that live near (and even along the edges of) the levee system, as well as, the public work itself and all that it

contains. This type of thinking is also known as systems theory in anthropology, which I will also explain later in this thesis under the section titled *Location*.

The connection, including any and all other biological and cultural facets inter and intra-linked to the artwork of the levees, is expansive. These linkages made thru community, individuality, health and the aesthetic results from the observation of the RCFCP-HC as a universal reality (or artwork). This observation is in addition to engineering system thinking but further works in dissolving binary subject-object constructs because of the organisms, plus autonomy paradigms, in play. The RCFCP-HC involvement with the dynamic relationships of its storytellers' variables have created an even greater intricacy of complexity, but not complete chaos. The following examples are a sample of more of the transmogrifications I found while trying to explain the complex nature of the levee stories' ethnohistory related to place and purpose, including my own (Eriksen and Nielsen, 2017; Lutz, 2017).

Brief Summary of the Connected Hot Mess Concerning the Fish and Levees

It is a well-reported fact that the sediment and debris trapped in the RCFCP-HC cause the water temperature to rise. The 'hotness' causes the juvenile endangered salmon of Redwood Creek in Humboldt County to die. The salmon that once utilized the creek as a natural spawning bed and the pools for shelter have no place for refuge. Salmon need cool, clear water, bugs to eat, and sediment-free gravel in which to spawn. With the creek pebbles covered in sludge and the unnatural banks, a significant hindrance to their chance of survival occurs. The issues with the levees only get "hotter" due to failed infrastructure and maintenance for the community of Orick.

A complete history of the area is a part of what directly is needed to fathom the broad spectrum of issues regarding the levee system. Highlighting the salmon's significance in reports about the RCFCP-HC is not enough and is only part of the problem. The value of the fish population, much like that of the town's population itself is unmeasurable to any known standard. Therefore, outweighing any worth, the salmon population relevance continues to overshadow and impede real communications and action from happening. The endangered population does carry considerable importance but is only one tier of the extreme complexities of the area's history, separate and combined, with that of the painful history for the RCFCP-HC (May, 2014; DEH, 2014; NOAA, 2015; Lutz, 2017; See Exhibit).

Greater Complexity and the Parks

The RCFCP-HC meanders from the Redwood curtain towards the US Hwy 101 Bridge and then west to the Pacific Ocean. It has come to house many human encampments among the plant life along the edges of the levees. Seen easily is the homelessness by viewing satellite images which show paths leading down to these campsites beside the Redwood Creek. The disbandment of quantifiable waste is prevalent. The waste further contributes to the aquatic destruction of the United Nations World Heritage watershed. Division within agencies and with the public has occurred, which prevent any real solutions for the RCFCP-HC from happening (DEH, 2014; Spence, 2011; Save the Redwood League, 2016; See Location, See Surveys, See Multimodal Anthropology example, See the Interview transcript).

Multifarious undercurrents brought the United States Department of the Interior's National Park Service (NPS) to set in place the Redwood National Park (RNP) in 1968. The park included some state park lands deeded to California in 1923 around Orick. Levee completion happened the same year the creation of the National Park in Orick began. When the expansion the National Park's environmental protection responsibilities grew in 1978, Orick's growth started its decline. NPS and the California Department of Parks and Recreation (CDPR) agreed to co-manage the national and state parks in 1994, now RNSP or what is commonly called *the Parks* (Spence, 2011; DEH, 2014; Beissinger, Ackerly, Doremus and Machlis, 2017).

"To preserve, protect, and make available to all people, for their inspiration, enjoyment, and education, the ancient forest, scenic coastlines, prairies, and streams, and their associated natural and cultural values, which define this World Heritage Site and to help people forge emotional, intellectual, and recreational ties to these parks" (though an example of wordiness) is the current official mission of the Parks. At the heart of my undertaking with Levee Stories is the acknowledgment of the prominence of the RCFCP-HC as a primary topographical concomitant to the Parks. But, because of poor negotiations from past actions, the levees fail to fulfill the mission of these parks. Additionally, as my research will explain, by not having the significance of the RCFCP-HC available for the public, the National Park Service (NPS) and other area agencies would be in violation of fundamental human rights which, in turn, is unethical. (2011; 2014; NPS RNSP prospectus for employees, 2016; Save the Redwood League, 2016).

Entangled in Orick

New to the Pacific Northwest region, I volunteered as a camp host for the Orick Rodeo Grounds. The rodeo is usually held the second weekend in July. Arriving at camp the week post-rodeo for that season, I found the grounds in a somewhat isolated location under the eastern shoulder row that the RCFCP-HC formed. The grounds serve as an equestrian camp for riders during the year when the rodeo is not taking place. Day riders typically take guided tours conducted by two separate female owned horse riding businesses.

The guided horse tours begin with a ride along the levees path east to the RNSP trailhead. The National Park area on the east side of Orick begins directly where the redwood curtain tree line starts. Occasionally, overnight riders with their horses will stage camping at the grounds for a night or two. As camp host, I wrangled general upkeep and kept a daily record of weather conditions. I recorded astrological happenings, tide tables, and area events and posted them for the public to review. Establishment of both personal and business rapport quickly occurred with companions, both in the form of native and foreign biological beings.

Collaborative negotiations were marshaled daily with area locals and any visiting populace. Visitors to the grounds often had somewhat larger global experiences than what one might think them having in such a little town due to the proximity of National and State Parks and the US Highway 101. I met a traveler that identified himself as an Israeli at the camp who arrived on his bicycle on tour down the coastline. I asked him

why he was making the ride and he informed me it was to escape the war taking place back home. I met others passing thru Orick; veterans, marijuana trimmers and the disenfranchised. Maybe they all were trying to do the same as the international cyclist. I learned that sometimes, perhaps, it is better not to ask.

Still being participatory observation at the time, which is knowledge gained thru action (Merriam and Tisdell, 2015) my research chiefly consisted of story listening and telling for the end of that summer and continuing into autumn. There was a lot to take in and do without internet service and other amenities. My nights glowed with campfires and mornings held what my husband, who at the time was only my fancy, would name the second sun rises. The first of the two sun rises would start at the break of the day followed by the second rise which would occur when the sun again broke thru over the old growth forest canopy. In the afternoons the sun would go again into the notorious Humboldt fog. The somatic centered lifestyle allowed my circadian rhythm to get in sync and I unplugged from a hype-driven societal norm to return to a more organic observation of the planet. There were clear benefits and difficulties shown from my self-imposed experiment.



Figure 1. Family Tree for Annie Tepsaw Griffin Frey

Provided in Figure 1 is the formation of the ancestral heritage of Annie Tepsaw Griffin Frey [Aneki Tepsic]. A rough draft of the image was initially sketched by myself three weeks after arriving at the rodeo from oral history told to me from relations to Ms. Frey who still reside in Orick. Figure 1 is an updated computer generated map I derived from the original sketch. It is shown as an example to demonstrate some of the various ethnohistory I came across from my time in The Valley.

Annie, who was Yurok and the oldest of four sisters, assisted in the clearing and settling of the wilderness valley that is now known as Orick at the turn of the previous century, alongside George Griffin. After George had died, Annie continued this endeavor with her second husband, Emil Frey. She was also a mother to six children. Annie was sister to Fanny Flounder, the well documented Yurok Healer within the works of ethnographer Alfred Louis Kroeber. The history of Annie's relationships I linked to

families that live on the north side of the estuary plus at other locations along the RCFCP-HC path still in Orick.

All kinds of stories were told to me in Orick, some directly about the levees, some not. My work morphed into the determination of what the landmark of levees was and how the rest of Orick interconnected to the RCFCP-HC. Annie's family tree is just one example of many visualizations linked to the RCFCP-HC that took place during my stay in Orick. Additionally, at random almost a year later, I found the ethnohistorical summary in data text without a much-needed cartography telling Annie's story in the repository at the universities resource for area history known as the Humboldt Room. The finding of Annie's Story reinforced that others have also observed stories in Orick but not have been fully told (Stanton, Van Kirk, and Hamilton, 1995; See Vinyard Collection, 2016 and Van Kirk Collection, 2017 at the HSU Library Humboldt Room).

One of the most beautiful chromatic ethnohistories I ever heard involves Annie. The description told of how Annie's young children woke up in her redwood canoe covered in salmon after Annie had fished all night with them in tow within the estuary of Redwood Creek. She was doing this to feed them when her husband was away to try to seek gold in the Klondike. These days are unfortunately gone, but an imaginal piece of me wonders when I look at the rich complex blues in the Pacific Ocean what those fish must have felt, smelled and tasted like for Annie and her family. I also wonder how the RCFCP-HC has additionally impacted the tragedy of this history.

Consequently, from noticing such stories, I started with reading park history, pre-park history, and works from Kroeber to gauge where I was. After witnessing the Hoopa-

Yurok Settlement (United States Congress Senate Committee on Indian Affairs, 1993) via an old VHS (Video Home System) tape out of curiosity as to what it was, I figured there was probably something behind all the effort I was putting in. Having been programmed at times to make things more complicated than they probably need to be, I have learned that this is not a defect but instead just comes with the territory for the type of method I use.

This method is Participant Observation. Participant Observation is often best done with what others believe to be instincts but usually is the result of great practice and discipline to the technique itself. Participant Observation is when someone seeks knowledge for knowledge sake and places its footing within the French philosophy *l'art pour l'art* (Eriksen and Nielsen, 2017; Spradley, 2016; Staddon, 2016; Rapport, 2016 (1&2); Rapport, 2017). The time I spent seeking knowledge at the rodeo laid the foundation for a further anthropological study to be conducted over the next year regarding the RCFCP-HC. I'll never forget my time spent in The Valley and all I had to experience there which began the next chapter in my reflection. As the Yurok People remind us all, the tall trees will remember and reward kindness (The Story of the Murrelet seeking Shelter, from a long, long time ago).

LOCATION

Where the Management Theater can be found and Maps

The range of the RCFCP-HC includes a highway, an estuary, the national and state park service, private landowners plus multiple other agencies located in and outside of The Valley. The other involvement, by organizations, occurs for various reasons such as agriculture, the environment, and welfare. The participation of these relationships generates further complexity. All of the involvement causes the levees to carry a greater scope than merely that of local government and the Corps. Comprising the public work's scope, using a metaphor, is *Management Theater*.

Management Theater is a concept that spans not only the systems management for the levee but also encompasses relationships to the applied fields of anthropology (which are archaeology, biology, culture, and linguistics). Systems management involves the human relationship towards health about a project, also known as ergonomics in engineering. Management Theater covers the diminuendos of these human factors in an engineered work of systems management. But because of the conceptual semantics (the cognitive structure of meaning) regarding the location of what I see the levees as being, public artwork, the healthier use of the concept Management Theater begins to greater reflect what is known as systems theory in anthropology. I will now try to explain how I applied this thinking to my work in Orick.

This code and theory were chosen based on what I know at this time about it and my experience of being exposed to it. Thinking reflects in the way the levees reveal itself thru the tiers that tell the levee stories (Davies and Elder, 2008; Weideman, 2017; Cooper, 2015; Snowden, 2015; Senge, 2016). In Table 1, what I have titled Tiers of RCFCP-HC's Complexity to Level 5 begins to display what I think are broader plots which link to development found thru arrangement of actions both in tangible and intangible forms or the Management Theater taking place.

Table 1. Tiers of RCFCP-HC's Complexity to Level 5

Level	Plots within the Management Theater
5	Systems Management(s) or FCAPS: USACE; Humboldt County Public Works; NPS; Federal Emergency Management Agency (FEMA); NOAA National Marine Fisheries; NOAA National Weather Service; U.S. Fish & Wildlife Service (USFWS); United States Geological Survey (USGS); California Department of Fish & Wildlife (CDFW); California Coastal Commission (CCC); State Coastal Conservancy (SCC); North Coast Regional Land Trust (NCRLT); RNSP; OCSD; Yurok People; California Department of Parks and Recreation (CDPR); Humboldt County Public Health; Caltrans; CalTrout; Pacific Coast Fish, Wildlife and Wetlands Restoration Association; Society for California Archaeology; HSU; Northern Hydrology and Engineering; Stillwater Sciences, etc.
4	Both Formal History and More Authentic Ethnohistory
3	Distinctions and Effects of Designations for Terminology
2	Biological Influences & Cultural Prominence
1	RCFCP-HC as a Public "Art" Work

Level 5, the latest stage added to the tiers are all of the known agencies associated with the levees' systems management. The other levels before level 5 fashion other

aspects of the levees that are also relevant to the administration of the levee system. This relevance is important to realize when holistically studying the RCFCP-HC. As an artwork (level 1), the organization both biologically and culturally (level 2), is subject to change and susceptible to memory, as are the levees itself (level 1). Ideas such as evolution, language use, and systems thinking (level 1 thru 5, etc.) create a broader network. This more comprehensive knowledge of systems is better at describing the management of the artwork as theater than a fixed scheme such as fault, configuration, accounting, performance, or security (FCAPS) managements to which the ontology of systems management reduces (Eriksen and Nielsen, 2017; Nampoothiri, 2017). So all layers may affect (or influence) various other levels of the theater taking place.

With theater being a complexity of plots, it stages both scripted and unscripted levels in narratives within different arrangements and echelons of systems. These levels cause the use of Management Theater to replicate a more authentic environment for my analysis. Theater makes for both qualitative factors and quantitative figures showing tragedy, comedy, spectacle, play, production, and performance taking place; necessary for the stories that result from the artwork. Another way to think of the Management Theater concept is discerning relationships found in the coexistence that make up the levees. Greater consideration of the spectacle of cohabitation, at times not always harmonious, that the RCFCP-HC produces can be thought about when observing the following maps, Figure 2 and 3. The maps tell us further stories as they generate extra levels (also seen as threads) to the staging (or weaving) of the RCFCP-HC's complexity for analysis.



Figure 2. Bird's Eye View of RCFCP-HC

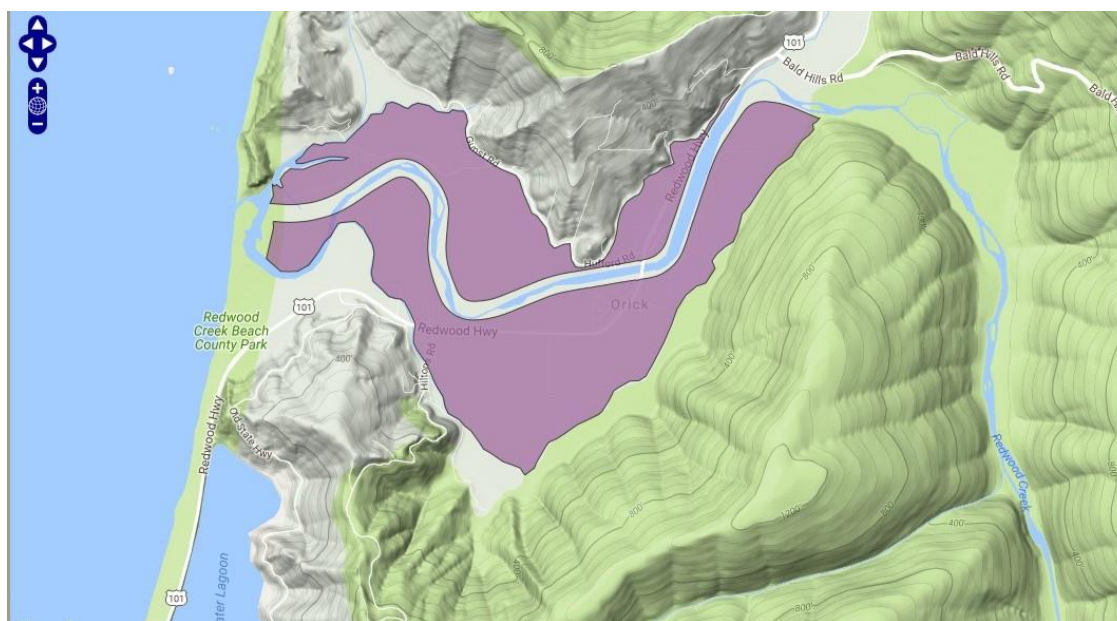


Figure 3. National Levee Database Map for the RCFCP-HC

The first map (Figure 2) is aerial photography and satellite imagery that shows the whole levees system from what one could observe as like from a *bird's eye view*. The next map (Figure 3) is computer generated imagery (CGI) from the USACE database. In Figure 2, the satellite image shows the damage of the overextension into the estuary. Figure 3 is composed of overlays of color displaying the flood area, where the path of the levee goes and where the natural Creek's path (not its current one) travels. The CGI, not having the current path (and damage) of the waterway communicated, creates a hypothetical narrative. It is one perspective of many in the Management Theater of the RCFCP-HC.

The satellite image, Figure 2, does show the damage the levee has done. A small landmass that has developed in the estuary is displayed. This landmass, managed by NPS, is an inlet area deeded to them from previous private owners. The landmass is not accessible to staff effortlessly. The access is permissible by the two families who currently own land on either side of the creek in the estuary. This detail, part of the location of the theater taking place, impacts more than the Park Service and the two families. Within dynamics of transition zones, boundary lines are not always able to be marked or bent. The public can get caught in the confusion of the drama occurring inside the fabricated dream of property ownership. Also, with the earth subject to movement in the estuary (and in general) this illusionary thought of land rights (ownership of the land and not observing it as, well, our collective ship!) continues to remain questionable as to where and by whom owns what along the RCFCP-HC path and its surroundings. (DEH,

2014, Cavazza and Charles, 2017; Chandrasekaran et al., 2016; Nampoothiri, 2017; Larsen-Freeman, and Cameron, 2008; Aucoin, 2017)

More Dynamics, Land Use, and Selected Populations

Adding to the complexity of the levees (in its Management Theater with emblematic visual topographies), Redwood Creek in Humboldt County can be confused with the entirely different waterway in California known as Redwood Creek. The second Redwood Creek is ironically undergoing restoration efforts by the National Park Service at Muir Beach in Marin County due to years of farming and development, which has also created a dysfunctional water system (Savidge, 2016; Vick, 2003). Issues with the Redwood Creek in Humboldt County waterway are somewhat different yet no less imperative to its geophysical science (Cockerill, Armstrong, Richter, and Okie, 2017; Montz, Tobin and Hagelman, 2017). With providing this evidence for the greater understanding of location, it is important to note that land use is a common bond with hydrological regimes. Due to the relationship inferred I began my investigation into the two groups I knew were involved with land use in Orick.

The two groups are the Orick Community Service District (OCSD) and select employees of the NPS RNSP that work, in some aspect, with factors that influence the RCFCP-HC. The OCSD is composed of a board that meets once a month to discuss matters related to the levee system. The RNSP employees associated are part of the park's science and management division. Both groups hold and have expressed levels of contention towards the county, the corps and at times themselves over the RCFCP-HC

situation. All members of the combined populations which make up part of the Management Theater (and community) hold deep invested interest and concern for Redwood Creek in Humboldt County. Circumnavigation of their interests and concerns is one reason why the methods I performed (and the methodological triangulation thereof) were difficult. It is also why it is paramount for finding the stories, a conclusion, and recommendations; all of which are further levee stories (Kryger, 2017; Lázaro, 2016; Lodhi, 2016; Ogarkova, Salinas and Gladkova, 2016). The following section is the methods I conducted for my thesis project, www.leveestories.xyz.

METHODS

Research Design

My participant observations began as informal interviews and discussions with residents and officials as well as personal field notes and various qualitative observations. This anthropological method served as my research design using heteroglossia analysis to apply the interpretation of the observations to establish the levee stories as the significance for the RCFCP-HC. The method soon evolved into more formal research including the use of library material and archival research as well as more official conferences, meetings, and interviews in addition to continuing the casual exchanges with individuals. All materials I reference as documents of capital and chattel are any secondary research already available and ongoing historical archaeology performed and managed herein. This acknowledgment is of the value of such materials and also their cost (Gibbs, 2012 YouTube Video: What to Observe in Participant Observation Part 1 and 2; Creswell and Poth, 2017).

Field Notes

Conversations influence and perpetuate research (Gibbs, 2012 YouTube Video: The Nature of Social Research). Research has happened from before my arrival in The Valley to my departure, up till now, and discussions directly and indirectly about the RCFCP-HC have occurred throughout. These continuing casual exchanges (or dialogue) are a *give and take* qualitative practice or mini-interviews that allow each participant to

consider observations (including memories, feelings, and enigmas) that may exist towards the artwork of the levees. These informal dialogues often happen throughout the research. Written mental recordings of interactions are field notes. Because both a conversation and interpretation of the interaction is going on with field notes, it can be helpful to separate the actions into a table (Gibbs, 2012 YouTube Video: What to Observe in Participant Observation Part 1 and 2; Wüthrich, 2017). For the RCFCP-HC, I distinctly recall a casual conversation my first day at the rodeo that I provide in this manner, seen in Table 2.

Table 2. Field Note from First Day at the Rodeo

Place: Orick Rodeo Grounds, Humboldt	Date & Time:
People present: Orick Resident, Researcher, Outside Witness	July 2014 / Afternoon (before the fog set in)
Conversation. Orick Resident: “We go up on the levee out to the tall trees.” Me: “So where the trail is, where you take your horses on, that is the 'levee'? Is it part of the park then?” Orick Resident: “My Dad owns the levee. The park's trail starts at the tree line.” Me: “Ok.”	Interpretation. Researcher Notes: That doesn't sound correct; just one individual owns the levee? Aren't levees part of what the USACE do? If your Dad owns it, is your Dad the Army? The ridge seems messed up; it doesn't look like any levee system I have seen. What is up with all the riparian growth? Are there people living on the edges of it? Where are the signage and detectable markers that other National Parks have? Is the Park as broken as the town and levees appear to be?

This discussion with a lifelong resident of Orick explaining that the levees were privately owned sounded like a false claim as seen in my interpretation of the conversation. From our exchange, the formulation of a quest to discover if the statement was true inadvertently materialized. This type of personal journal entry style recording of the everyday occurrences began my unhampered research. The example in Table 2 also shows the beginning of my collection of field notes and research becoming more formal and focusing in on the situation of the levees in Orick (Gibbs, 2012; Wüthrich, 2017).

Documents of Capital and Chattel

Shepherding and rounding up of all other documents about the RCFCP-HC commenced in addition to my continued field notes. The retrieval and collecting of the various forms of supplemental documents for an investigation is commonly called conducting historical archaeology (Gibbs, 2012 YouTube Video: The Nature of Social Research & What to Observe in Participant Observation Part 1 and 2). Historical archaeology investigates documentable materials from the past to present. The past and the present for the RCFCP-HC included secondary research, artifacts, photos, death and birth records, newspaper clippings, agencies reports, brochures, handouts, advertising plus promotional resources about the levees and their surrounding area. Performing management of this type of historical archaeology is the transferring of the materials collected into a repository. Repositories consolidate the materials into an archive. The technique's name for building an archive is known as *processing* in archival research (Moore, Salter, Stanley and Tamboukou, 2016; Griffin, 2015).

In the role of an archivist, processing in research is an organizational ability that develops thru skills that are learned. Additionally, because datasets of information (similar to the universe itself) expand when conducting research, varied life experiences can aid in determining the importance of what to keep in the repository, as not to become overwhelmed (Schramm, 2017). Using my skills and life experiences, I created a physical and digital repository for research on the RCFCP-HC. These documents, as verifiable materials collected, were then easily available to me for analogous scrutiny of the heteroglossia within the findings to use towards my quest for understanding the levees' significance.

Comparative investigations allow a researcher to equate items to other materials and experiences to find patterns (Gibbs, 2012, YouTube Video: The Nature of Social Research & What to Observe in Participant Observation Part 1 and 2). One of the trends (or plots) discovered in the documents relating to the RCFCP-HC was that of miscommunication (Man and Muhammad, 2016; Fleming, 2013; Yang, 2016; Liang and Liang, 2015). With the nature of this plot being somewhat comedy but mostly tragedy, the lack of connection between all parties involved with the levees in Orick exposes itself within the repositories I built. Whether you are considering the communications between agencies or the acknowledgment of other local situations; there was never a complete representation given to the issues occurring in Orick about and from the RCFCP-HC plus its relationship back to the surrounding area. Shown in Figure 4 is a recent example of miscommunication happening I found in a letter from the Congressional member office (a staff composed of multiple voices or again, heteroglossia) to the Army budget office.

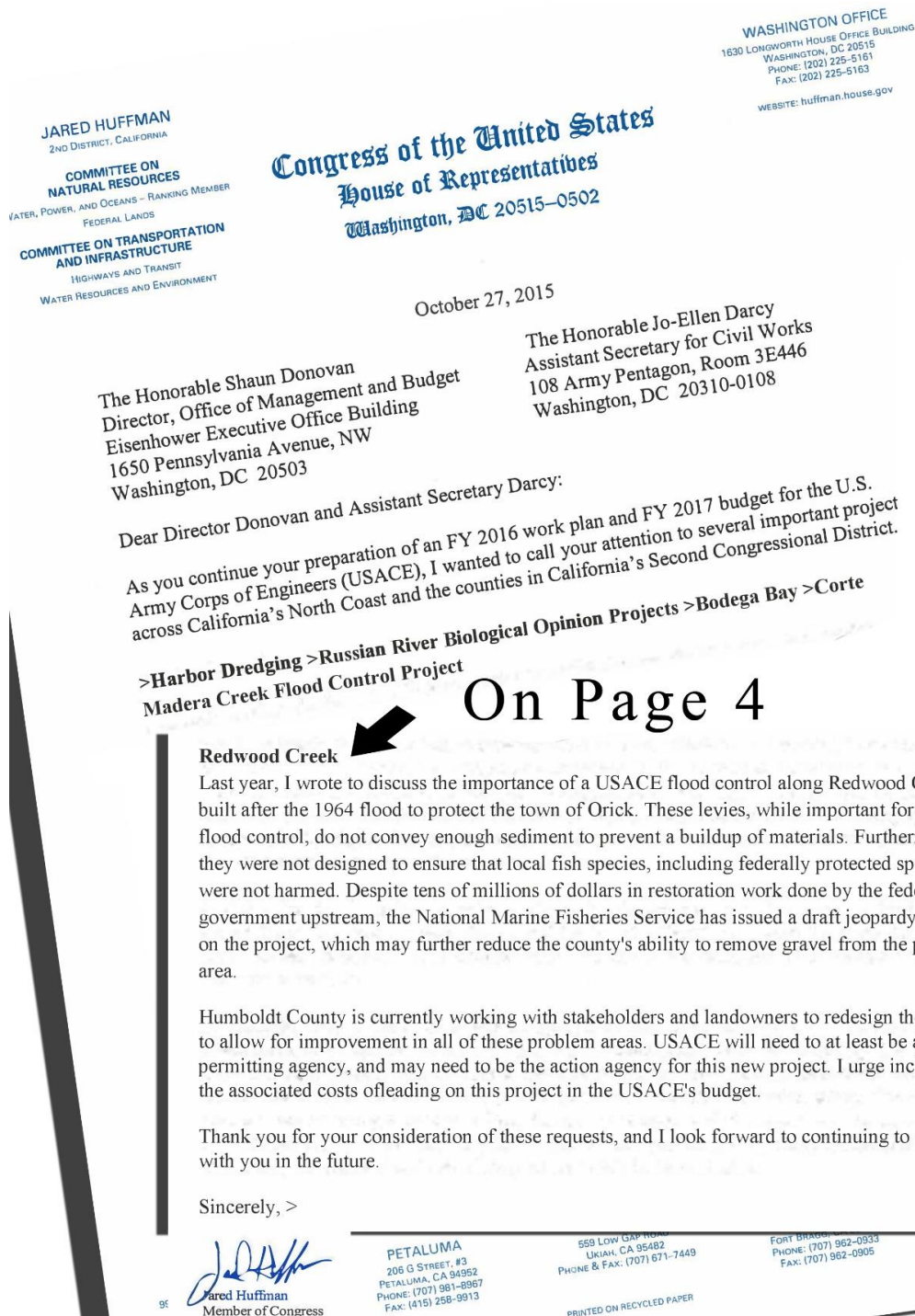


Figure 4. Letter from Member of Congress to the Army

From the example I give above, miscommunication is seen recently occurring in secondary research collected about the RCFCP-HC. The congressional office's plea for funding in Figure 4 communicates that the levee system is an ongoing problem. It does (for the most part) a good job at giving a range of the issues the RCFCP-HC carries. It covers what has been happening locally and where the Army is needed. Additionally, it urges inclusion of the cost for the Army to be the permitting agency within their budget. The letter caused me to wonder why the request was not successful.

When I further studied the applied linguistics happening within the letter, I found the following concerns that create the miscommunication. The title used to address the issues with the RCFCP-HC on page 4 of the long letter lacks the specificity needed to identify the levees location correctly because, as I have mentioned, both of the Redwood Creeks in California have land use complications. Also, the incorrect spelling for levees creates a confusing antimeria. The discussion does not communicate the complex scope of significance needed for the request of the Army to become the permitting agency. A skimming of the surface to correct the problems of the failing project might be the downfall of this document as it was for the DEH 2014 report and other communique regarding the RCFCP-HC's issues.

Surely not intentional by the Congress member's office because of the desire for the annexation by constituents, the letter does encourage greater division within the Systems Management for the RCFCP-HC. This encouragement is problematic. It paints a picture, again not intentionally, of a type of dualism implied of government (the County or voters) fighting the government (the improvements or the Parks, the money up stream

performing restoration due to inappropriate past actions performed). The incorrectness of the communication written is, unfortunately, a wrong way of thinking; stifling the path towards future success for change in narratives (Senge, 2016; Leuchtag, 2017; Fleming, 2013; Liang and Liang, 2015).

Additionally, as my research will show, the collaboration the Congressional office is implying should happen within systems management could have made matters worse for the community in the past. The collaboration which took place during the old bridge removal might be an undercurrent at play with the Army's avoidance of addressing the problems the flood control project has caused with the estuary. Without having the levee stories known no one knows for sure. Before further requests, such as the letter are asking for, can be considered, the importance of the RCFCP-HC needs telling in the public domain. The telling will assist in better understanding of what more is at play involving this system (Man and Muhammad, 2016; Liang and Liang, 2015; Senge, 2016 Fleming, 2013).

Survey

Starting with the two groups; the OCSD and the RNSP, I created a five-question survey. The pairing of working class residents with deep connections to the region in community government roles and the Federal employees linked to the levees mainly based on its location to the National Park provided detailed accounts in their own words on the issues involving the RCFCP-HC. The information gathered, linked with my other observations, prepared further refinement for the final thesis project titled

www.leveestories.xyz. The website showcases the survey answers to give a first-hand account available for further discussion and interpretation to support the materialization of the reconnaissance study. The following provides two survey questions and answers, one from each group, showing more of the escorting informational capital that I received and used to better understand the RCFCP-HC's significance. (*Note in the second response (Question 4), the term *dike* is another word used to reference the levees.)

Table 3. Two Samples of Survey Questions and Answers from the Community

Question 3: Are you happy with the maintenance of the Redwood Creek/ levee?
<p>“The problem is that the Corps 1968 O&M (Operations and Maintenance) Manual has not changed and the Corps idea of maintenance at the time was a smooth trapezoid channel devoid of all channel morphology (bars, pools, etc.) and vegetation. It is not 1968, it is 2016, and the O&M manual has not changed to reflect the thinking of today. The county is between a rock and a hard place. The county does not have the money for maintenance. They have to maintain the levee or will be legally liable if their deficient maintenance causes flooding damage to the surrounding landowners. They were given a project that has inherent design flaws that causes headaches for them.”</p>
Question 4. Has the levee system affected your life since you have been here?
<p>“I still have a home because of the dike. I am very cognizant of the loss of wetland habitat and its impact on birds and other species. I feel that dike needs to stay but be modified to be multipurpose. Wetland habitat at the mouth but still function as a dike further upstream. Long term planning for vast environmental changes that will affect the topography and water table. We have made mistakes all along the way and picking our fights is not the solution. Environmental degradation is a worldwide problem that needs core value changes for all of mankind. We usually get there the hard way. Now is NOT the time to disrespect the past and those who are immersed in that world. Instead, honor history and its products. Work from there with consensus. Proper unbiased education on the issues is a very BIG component. Not side vs. side but with</p>

mutual interest as a starting point. You won't find a person in this valley that does not love it. People and their systems are a part of nature needing recognition as much as other life forms. They are part of the equation, and their exclusion will be the work of nature, not man.”

As people describe what they believe is needed to create a solution to the problems with the levee system, I was able to process these answers into usable information. Explanatory breakdowns of the samples received from the surveys include measured quantitative percentages of answers given, word counts, word clouds, which generates narratives for interpretation. The reviews gave way to the pursuit of further clarification to the gamut of the untamed stories (Gibbs, 2012; White, 2017). At the time of the survey, the referral was given to me by the participants to interview both the Deputy Director of Water Management for Humboldt County and the Fishery Biologist for RNSP. From the research gathered by the field work and previous to the survey, the question that I wanted to know had already emerged to help with circumnavigation and direction. The question given to both officials was to tell their story about the RCFCP-HC in a practice narrative format (Gibbs, 2012 YouTube videos: Research Interviews 1-5).

Practice Narratives

Practice narratives are a type of interview that focuses on contributor's strengths to confront an issue; done by asking simple open-ended questions that give ease to the partaker to recall memories regarding an artwork or shared reality. This exercise allows specific details to be provided rather than just their answer to a problem/question. Asking for individual responses establishes rapport and, when comfortable enough, the narratives provide detailed answers (Gibbs, 2012, YouTube videos: Experiments and Quasi-experiments 1-2; Research Interviews 1-5; Reliability, Validity, Generalizability and Credibility 1-3). The interviewer and interviewee also co-author a new continuum of the larger story that human kind has been telling from before the beginning of everything, sometimes referred to as the monomyth. Additionally, co-production occurs with analysis of the narrative progressing into further stories or the branch of knowledge that deals with interpretation called hermeneutics (2012; Campbell, 1949; Ogarkova, Salinas, and Gladkova, 2016).

Tradition of an Outside Witness

An outside witness can serve as considerable wealth to practice narratives. As invited listeners, an outside witness to the solution can build or establish rapport. Also, as a listener, the bystander can provide hope to a given situation which may appear hopeless. The contributors gain additional perspectives that they might be overlooking when identifying the problem (Gibbs, 2012 YouTube video Experiments and Quasi Experiments 1-2, Research Interviews 1-5). An outside witness for the second practice

narrative I conducted with the Fish Biologist from RNSP was only eight months old at the time of our conversation. The baby, my son, was invited by the biologist to attend the meeting. My son added a bit of comic relief which presented itself when he rearranged the biologist's office by pulling all the files out of the drawers and any other curiosities off the shelves. The outside witness made us all laugh a little bit at ourselves plus realigned a mother's perseverance to finish her thesis project.

Chance Meeting

Curious to speak with someone from Caltrans from the start of my research in The Valley, because of the large dynamic the US HWY 101 plays within the landscape for the region, I remained unsure how it was going to happen. When the District 1 Director of Caltrans spoke at a shared public event I attended, as summer was beginning in 2016, the opportunity for an interview presented itself, and I took it. I introduced myself, had a brief conversation about my research thus far, and requested an interview. I received a business card with contact information. The District 1 Director informed me just to call and set a time with the secretary. A few weeks later, I called to schedule our conference.

During this initial chance meeting, I asked the director about the newer Ralph Miller Bridge and the removal of the old truss bridge. I had previously been informed in February of 2016 by a Yurok Elder, from a brief conversation, that it was quite the production for Orick when the newer bridge replaced, the older one. Presaged to tell me a quick story, the director informed me about how the man who cut the steel out, blew smoke rings in the Lead (Pb) dust particles produced by the activity. "It was absolute

madness,” the director said. The brief story the director gave me foreshadowed our interview to come.

Interview

The conducting of the interview at the Caltrans District 1 office in Eureka California was in a board room setting. Previous discussions with the Deputy Director for Humboldt County Water Management and the RNSP Biologist took place in their offices, and both assisted me with feeling at ease again in the boardroom environment; which my past, though now being a few years removed due to my research, formally included. The hallway before getting to the room exhibited photographs on its walls of various transportation projects which involved the District. I wondered if the rerouting of the Lookout Point location in Orick hung someplace in the collection. My son was at the meeting, this time not as an outsider witness, but as a baby sleeping in his stroller.

The room was modern industrial looking. It had a long solid table surrounded by conference room swivel chairs. The director sat facing the door as I came in on the right side of the table about midway from any one end. The room was large enough that my son's stroller would fit next to the chair I sat in but not much more space than that on either side. There also appeared not to have been a door on the other end of the room behind the director (but I am not sure at this time if there was or not). I remember thinking that if the Director wanted to leave he would have had to climb over the table, the chairs or the stroller to get out the door where I came in. This escape did not happen during our meeting, but the thought of its possibility made me giggle and cry a little bit after the event.

The Director had a book that appeared to have pages marked, sitting on the table. He stood up and shook my hand when I entered. He acknowledged my son's presence, but he did not change or soften the tone of his voice when we began our conversation. My son remained asleep for the majority of the interview, only making a few subtle baby noises during the meeting. My child was ten months old at the time of the interview. I remember feeling grateful for my son's behavior and timing which, in retrospect, is ridiculous. I'm thankful for my child, not his behavior and regardless of his age. This sensitivity, I believe, came from thinking that a type of intimidation was present during our meeting. Intimidation is an illusion (not reality) and is one of the many tricks performed within the actions of the systems management tier, similar to the story of the CSI map that I have shared in the Location of the Management section of this thesis. It was important for me to remember what the actual shared reality is in this setting.

Not vulnerable in the boardroom setting was the Director, and I think that if needed he would have climbed over the chair to get out. He was not trapped. I, as a working mom without an income for affordable daycare and not having it available to me because of a long waiting list thru HSU's child care resources was possibly more stuck, depending on the interpretation of the situation. I do not believe I was though and I brought my son to a setting and am again writing him into my research as a reminder of the past, present, and our future. Additionally, having been living on a rodeo, in a remote location for over two years with little amenities, coming back into a boardroom setting was a little challenging for me. Because of my son's attendance, I believe I was able to

relax enough to ask the questions I deemed necessary to understand the state of health for the community concerning the RCFCP-HC.

My son's role during this meeting was that of innocence. At times, this part is still not always accepted or understood universally, and I think I needed to learn that fact from my experiences researching levee stories. The fact is that innocence holds a special place within research because it is vulnerable. Exposing vulnerability is sometimes the only way to continue exploration, but it's hard to allow at times. The susceptibility of all levels involved in the created environment reflects in my son's attending at this meeting. It is with caution one must always approach research with the subjects that are vulnerable and do what must be done to correct any wrong doings. Not doing so can be detrimental to the health of the subjects and future subjects. I believe my son has been an essential element through my research and if I had chosen not to explain his part and what I have learned from him, I would be leaving the levee stories incomplete.

Additionally, my hope is that in writing about the situation the participants found themselves in will allow the transcripts of my research to read with an understanding of the theater that was taking place during the conducting of this investigation. My son, not invited to the meeting by the director, is an element that provides insight into our era and is evidence of our collective future threatened (what we should be choosing for it, and why, is another greater plot that the levees contain). For me to understand where I stood in regards to the future I needed to engage my son's attendance to the interview. His presence, if for nothing else, serves as a reminder in my writing of something that

occurred at the beginning of my anthropological studies at HSU and is a reason for my awareness of the approaches to vulnerable subjects, our meta-plot, and community.

By the end of the interview and the dialogue I had with the Director, my son was awake, as I continued to be. The Director escorted us out of the room continuing pleasantries but with what appeared as his curiosity bent. His secretary met us, and we said our goodbyes. Down a hallway to the check-out station, I stepped thru my exit. Taking some time, I have tried to process the data in transcript form from the interview. Conversations about the interview, plus its triangulation to other methods I conducted, will follow in continuing stories of my thesis and also permit further discussion (Gibbs, 2012; Ogarkova, Salinas, and Gladkova, 2016). Presented as Exhibit 1 in Appendices is the full transcript of the interview.

Methodological Triangulation

Within assemblages of informational research, methodological triangulation upsurges the nuances trapped and carried within the work done from the manifold of approaches I took towards understanding the RCFCP-HC as an artwork. The technique may not always be able to externalize meaning in research if prior methods conducted do not include sufficient perspectives of a set reality (or artwork) being studied (Gibbs, 2012; Kuhn, 1970). The technique, however, can often permit legitimacy for the previous investigations performed. Legitimacy comes from within the activity of organizing narratives, breaking down of analyses and evaluation of findings thru interpretation. When implemented correctly, the methodological triangulation results in allowing the significance of the artwork to surface. At given times disengaged bias also occurs with some participants through the application of the technique. (2012; Ogarkova, Salinas, and Gladkova, 2016).

Research Supervision

All of my inquiries were as overt as possible. I tried to remain as direct as I could with other participants as to the research I was conducting. I did not have a set, Imperial, overly grand sequence. Direct questions of genuine curiosity evolved into the clear, informative science needed for the framework of the project website to be created. University policies regarding the re-distribution of gathered information comply with all known regulations.

My material was available thru shared-resource digital applications by team request, or invite, during its gathering by University advisors. All information outside of that, required by school policies and institutional review board, does remain copyleft at this time within revisable datasets. Copyleft is an arrangement whereby software or artistic work may be modified and distributed freely on condition that the same state binds anything derived from it. Copyrights of information maintained happened only when it was deemed necessary to do so (Barnett, 2015).

I reviewed the collection of information upon completion to ensure and demonstrate compliance with HSU-IRB regulations and requirements. In the appendices is the Copy of IRB approval for research conducted. Additionally, the personal laptop and external hard drive I used was for research purposes only. Any information that remains on the personal laptop will be stored and retained for three years. My external hard drive has been placed in a dark archive now for at least five years. No extra expenses are seen at this time to stay within the agreement.

STORIES

Field Work

Observation, 22 months in duration (July 19, 2014, to May 23, 2016), occurred while living near the levees location and working within the community. From the initial field work completed, I learned an idiomatic working speech of rodeo dialect and Yurok greetings. Also obtained was a general understanding of the region's indigenous population's living languages alphabet. I disbursed 180 hours of volunteer work for RNSP and the HSU Library's Humboldt Room for aspects of digitization for cultural resource management archives regarding my research location and the greater area's history and ethnohistorical accounts.



Special Collections Humboldt Room
Humboldt State University Library
3rd Floor, Room 308
1 Harpst Street
Arcata, CA 95521

Introducing the Lucille Vinyard Collection
Lucille Vinyard's tireless efforts to establish and expand Redwood National Park were crucial to protecting much of the planet's remaining old growth redwood trees. Housing the Vinyard Research Collection at the Humboldt State University Library provides students and the community with enriching opportunities to learn and be inspired by her work. The Special Collections Librarian, with support of the Library's paid HSU Student Scholar Interns, are making the research collections from this legendary activist accessible to scholars worldwide.

We encourage you to learn more about the Lucille Vinyard Research Collection at <http://vinyard.omeka.net>

Support for this collection comes from the HSU Library Vinyard and Van Kirk Trust. library.humboldt.edu/giving.html

Figure 5. Example of Outcome from Field Work

Survey Stories

From the ten surveys completed with the selected populations, seven were completed by pencil and paper, two via email and just one of the participants' answers were verbally given which I documented verbatim. Shown in Figure 6 are the totals I interpreted from the survey. First, I divided the answers into three groups of yes, no or other responses. The yes (correct or positive) answers were the first set, and no (incorrect or negative) answers were the second. If the question was not unswervingly answered as yes or no, directly as positive or negative or with the definite answer (see question 2), the title of *other* was assigned.

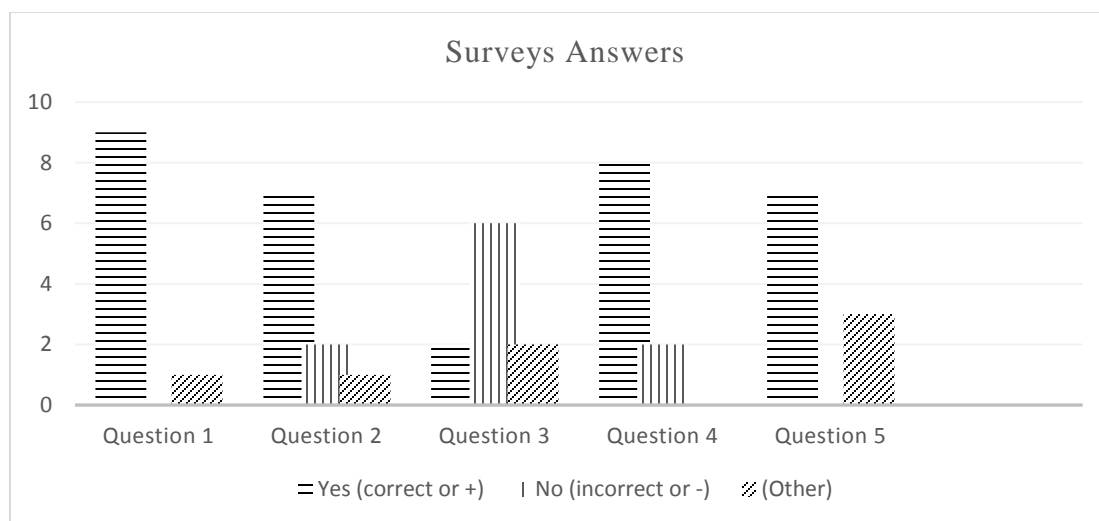


Figure 6. Layers of the Totals for the Survey Answers

For example, in question 1, nine participants gave clear yes responses, zero contributors responded to the question with a no reply and one person answered with neither a straight yes or no answer. This *other* response variable I further read into the

escorting information that the participant provided to determine whether their answer was comparative to either the positive survey data or the negative to help with aligning the perspectives of the RCFCP-HC. In examining the *other* response variable explanation given I then interpreted from the supplemental data provided by the participant that the answer appeared to indicate a yes or positive reply. So, accordingly, 100% of people surveyed agreed that the levee system in Orick is significant (from Question 1). I measured this interpretation, and all other answers from the survey into this type of analysis for the comparisons continued in the next paragraph.

Again, the analysis of the responses was done to determine which grade of measurement was needed to calculate our theater tiers (or perspectives) of the RCFCP-HC (Gibbs, 2012). Observation within survey answers confirms a confusion within the community as to who is actually in charge of maintaining the levees (from Question 2). The greatest antagonistic findings within the questionnaire concerned upkeep and maintenance for the RCFCP-HC (from Question 3). A total of 80% of individuals asked confirmed that the RCFCP-HC has impacted their lives since being in the area (from Question 4). Finally, from my interpretation, 90% of participants claimed that the experiences of Redwood Creek have been favorable regardless of the flawed levee system (from Question 5). Additionally, similar to Figure 4, several misspellings and misuse of the word levee were present in the community's answers for both populations (2012).

Dichotomy appears throughout the replies of the survey for the RCFCP-HC. The dichotomy is a division or contrast between at least two viewpoints but not necessarily a

battle or dualism yet. Carrying a dichotomy towards an artwork can cause complaints (or illness), correspondingly, so can the imposed levee position onto the estuary function. A language of ill health (a belief of being deprived) comes from an artwork when viewpoints are extreme opposites of the reality. The extreme positions do not allow for compromise because the states are assumed fixed. In the case of the RCFCP-HC, a fixed stance that the levee's imposition on the estuary's natural biology (grounded in cooperation of perceptible and imperceptible elements) cannot change begins the communicable disease. While fighting this disease of uncertainty (fear of change), perspectives can alter to dualistic where a battle starts with the interdependent and intra-related relationship to the artwork, which for this case is the RCFCP-HC (Bloor, 2016; Inada, 2016; Man and Muhammad, 2016; Yang, 2016).

This modification of the dualistic outlook towards the situation created by the levees is best described by a park employee's answer to survey question 5, shown in Table 4.

Table 4. Example of Dualism Found in the Management Theater

Question 5: Would you say that most of your experiences with Redwood Creek in Orick are positive or negative? And Why?
<p>“I have had some positive, wonderful times working in the estuary in good and bad weather; working with great people, learning about how the estuary works and its importance to salmonids, what lives there and when, seeing juvenile fish grow through the season; watching returning adult salmon swimming up through riffles in the lower river in fall; watching peregrines, osprey, bald eagles flying overhead hunting; watching otters swimming in the estuary, snorkeling experiences in the estuary; watching the waves in winter propagate up the river (mother nature at work); working with data collected from the estuary monitoring and figuring out what is happening and why it is the way it is; interacting with some of the residents of Orick who are great to work with, etc. But also, negative experiences seeing the large woody debris in the channel that is essential for fish habitat being continually removed illegally by wood poachers; having park gates and locks along the levee vandalized, impeding our access to the lower river to do monitoring work, once coming to a gate site where some people had removed the entire gate; interacting with some of the residents of Orick who have very narrow views of the levee and estuary; the levee is an eye sore not very beautiful, etc.”</p>

In table 4, the employee gives a summary of both his positive and negative experiences working directly in the estuary of Redwood Creek Humboldt County. His positive experiences with the waterway seem solely responding to the animal kingdom and his presence with it. The adverse experiences, although being a human himself, appear tied to an idea of a group of people as *others* and their experiences (but who are autonomous individuals) and each one's interactions with the creek. This formula creates a division (the dichotomy) which does not promote solutions. Access permitted after driving, boating and hiking to the location as a federal employee (accompanied with the privilege of being paid a livable wage) to conduct scientific experiments in the estuary does not necessarily lessen one's impact on the environment. Observations made with a wider lens of situations involving the human population of The Valley, including the employee, shows even greater elevated tiers (more stories) of Management Theater taking place in these comments. (Wilson, 2016; Bloor, 2016; Inada, 2016; Man and Muhammad, 2016; Yang, 2016; Gibbs, 2012).

The observations with the wider lens display history and ethnohistory, environmental elements with its ties to economic forces, plus the remoteness of the location, all at work in the estuary, not just the employee or agency. These cause a contrast and the dualism to begin. Somehow the employee wants a difference displayed from individual humans as if entitled to the estuary based solely on association. The entitlement is questionable based on the perception of what property is and whom the location (or the Parks) belong. Understandably, humans often see what they want to see to justify actions and are less concerned with observing what actually might be taking

place such as trauma. The described employee fails to see the homelessness along the waterway as a cultural and physical abandonment of purpose and also fails to question *why* it has happened.

All escorting informational capital (and the chattel) from questions and the exact answers from the surveys appear within the appendices. Further analysis conducted with the narrative findings within the survey answers and the methods which followed, confirmed a concern by the community for maintenance of the levee system. An indication of the distress recorded is shown within word clouds, word counts of answers, the practice narratives memos, and the supplemental interview transcript interpreted. Next are examples of both the word clouds and word counts made from answers to Question 3 of the survey.

Table 5. Word Counts Example (Question 3, 2016)

Total of times word appears	The word observed
10	Maintenance
7	levee, levy, levies, levees
6	Corps
5	vegetation, riparian, homeless, encampments
4	army, work
3	channel, estuary, gravel, system, creek, lower, needs, done, left

In both examples, it would appear the term *maintenance* is the primary concern in the responses given to the survey. With a further review of the accounts, I determined that this term was used to imply a need for support, not necessarily defining what kind of maintenance was needed. Therefore, I was able to identify that this word holds different meanings for individuals within each population. Another interesting relationship of terms appears in the larger words in the word cloud that includes levee, Corps, homeless and illegal. Also, there are suggestions of the misspelling of the word levee in the word counts. In the word counts, terms like riparian and encampment show more alternative tongues used for words. All of these factors I considered with my analysis for the RCFCP-HC.

Examples of Stories Found in Practice Narratives Memos

The Deputy Director of Humboldt County Water Management describes the dualism involved with water management of the RCFCP-HC towards policy in Memo 05, titled, Changes over Time & Environmental Laws found in the appendices. The Deputy Director thinks that the former actors' involvement with Redwood Creek has shown, at various times, they would like *to have their cake and eat it too*. As Mother Nature reminds all of us, this is simply not possible with the give and take of realism. The paradox is ongoing and is why laws exist trying to control that contradictory pursuance. The memo also offered co-authorship to systems thinking for the levee system and the concept of Management Theater (Gibbs, 2012; Puzzo, 2017; Lieberfeld, 2017).

The Fish Biologist Memo 04, titled, A Lemon on a Monday, also included in the appendices, crafts the problem of the RCFCP-HC in a revealing light which not only relaxes contributors but opens the narrative doorway to our monomyth. The Lemon on a Monday story is about the human perception of how, when a product is made wrong, it is called this fruit where the sour taste reflects the bad feelings linked to the poorly made product. Additionally to this discernment of labeling the RCFCP-HC as such because it is (a lemon), the fruit tied to the start of the work week implying that the goods manufactured on a Monday in the United States happen when workers come back to work after a two-day weekend break. Though not built on an actual Monday, the weekday inferred from the story is that the workers building the levees in Orick might have had their minds on other matters outside that of the work at hand. This textual imagery is, of-course, hypothetical theater because we could never know, but the memo's story is a way of outlining the mistake.

In the practice narrative, after exchanging a gentle smile with my son (who acted as the outside witness to establish rapport), the biologist began to externalize the issue. Expressive remarks (continuing in Memos 05 and 06 in appendices) gave identity to the problem, not the people involved. The exchanges show where policy has to give way for change to happen, and the preferred character that the biologist wishes the levees to become (Gibbs, 2012). The identity of the problem and want for change over that of placing blame on *the other* is the desired result of this type of training and, additionally, creates finer levee stories to share.

Use of Multimodal Anthropology

For utilization of the community's perspectives of the RCFCP-HC throughout my research and on the website as assistance in guiding direction for change, I used what is now being called multimodal anthropology by the American Anthropological Association. Formerly titled visual anthropology, the practice of multimodal anthropology encompasses all of the numerous forms of media that use findings from sensory information (such as visual and audio to magnetic and beyond) making forms of artistry with the possibility to use in scientific applications. From experiences thru these various formats, multimodal anthropology gives evidence towards a greater understanding of multiple perspectives and not towards the limits of them. The anthropology, therefore, is that of more stories, further substantial techniques with materials in which observation can take place. Whenever possible, provided, are contributors' names, dates, and locations of the recordings made from interacting with the anthropological project to support the role of individuality that humans, at times, need within our shared complexity (Collins, Durnington, and Gill, 2017).

The following is an example acquisition of multimodal anthropology from field work conducted along the banks of the RCFCP-HC.



Figure 8. Example of Multimodal Anthropology

Miscellaneous modern day artifacts and textiles displayed along the levee.

Date: November 8, 2015.

Photo Credit: Jef Walls, M.S. Clemson University, South Carolina and Poet

Lead (Pb) Indication

In the case of the RCFCP-HC, my methodological triangulation did bring legitimacy for the investigations that I performed. By triangulating the complexity of Management Theater for the RCFCP-HC, I observed articulations between field notes, conversations, documents, analyses, questionnaires and interviews enabling the making of a comprehensive, logical website to result. Thru the activity of organizing accounts, breaking down of analysis and comparison of causes, a more holistic revealing of the RCFCP-HC's significance, occurred. Observed disengagement found in the recordings of narratives allows an opportunity for dialogue about the concern regarding the Lead (Pb) from the bridge to happen in the future (2012; Creswell and Poth, 2017).

In the following, Table 6, the triangulation I performed warns that Lead (Pb) may still be in the landscape of Orick which caused provision for my thesis project and is why I ask for a further causal study now, in addition to, the need for the expedited reconnaissance study. I will further explain the reasoning after my presentation of the table and its disclaimer.

Table 6. Example of Methodological Triangulation Performed

Documents	Mixed Methods/ Survey, Practice Narratives, Chance Meeting, Interview	Field Notes
Last ‘real’ work done to levee happen same years as old truss bridge got replaced. Health records show residents with possible lead expose signals. Photographs of past bridges and work performed on the levee system.	The last ‘real’ work done to the levee in the late 1980s (early 90s) with trapezoid channel again made as road work performed. From Chance Meeting told Worker(s) over exposed to lead particles. At Caltrans Interview the Qualitative gen in transcript confirms lead and soil contamination happened with the removal of the Truss Bridge.	In Feb 2016, conservation with Elder about covering of old truss bridge during removal because of lead base paint. In Dec 2016 via a phone call to OCSD, I inform the chairmen exposure confirmed from the Caltrans interview conducted. “When are they going to come and get what they left here? They buried it in the levee and still need to come and get it.” said the chairmen.

As a disclaimer to understand the table before I continue; each section does not need to match the others, exactly, to be successful. The triangulation only needs to provide enough evidence that the actions behind the interpretation of information can justify what the researcher performed and why. For the case of my investigation of the RCFCP-HC, the inclusion of the creation of the website is necessary to make the significance of the RCFCP-HC publicly known. Additionally, for change to happen with narratives, further research is needed and will, hopefully (ethically) result. In the table, documents show a possible toxic health alarm, linking to the mixed methods which give the indication of the Lead (Pb) concern and why.

Under mixed methods, the health issues are further discussed and accounted for by describing the contamination of the soil happening during the removal of the bridge, confirming the exposed alarm. The OCSO chairmen also provide a new speculation that the bridge itself, containing Lead (Pb), might remain in The Valley's earth and possibly within the RCFCP-HC. My interpretation of the evidence provided from the table is presented below in italic font. It reflects my thoughts and concerns for the indication adduced. *Conclusion: A collaboration with the Management Theater might have happened which would have included the Army and some members of the RCFCP-HC's community. This drama would be that the collective buried the old steel truss bridge (or parts of it) containing Lead (Pb), into some of the soil of the levee system (and watershed) during the bridge's removal by Caltrans.*

Circumnavigation of the RCFCP-HC for Change

All methods, combined, needed some necessary time to be processed. With time, more reasoning ensued. From pooled methodological practices, the generation of www.leveestories.xyz, occurred. Insight towards the desired development and change in viewpoints is found in Table 7 and further explained. The stories on the site, granted all the same freedoms as works of art, will continue to develop and affect perspectives in the shared observation by a variety of greater participants (Senge, 2016; Schultz, et al., 2016; Ogarkova, Salinas, and Gladkova, 2016; Öhman, 2017). Table 7 is the navigation tabs sequence for the site revealing the subject of the stories about to levee stories and for our meta-plot (Nolan, 2017; Rapport, 2016; Rapport, 2017).

Table 7. Navigation Tabs Sequence for Website Revealing Subject of the Stories

Tab Sequence: Introduction / Ethnohistory / Location / Stories / Links
Tier 5: Community, Individuality, Health and the Aesthetic, etc.
Tier 4: Open to the Universe and all Participants/Storytellers therein.
Tier 3: Range and Scope, Management Theater, Maps, Land Use (plus Methods)
Tier 2: The Public with its Government
Tier 1: Orick, The Valley, Elders, Floods, Bones, Circus, Census, Parks, Mills, School, US Hwy 101, Travelers, Homeless, Bridge, Rodeo, Humboldt, etc.

This table gives the tabs with their tier influences being a running list of the subjects as the storytellers. Arranging levee stories where the subject is the storytellers

and not a topic allows the range of the stories to include ideas from understanding a word's origin to the denotation of its use in the historical contexts of timelines, environments, and approaches. Having the stories by subject and not a topic for the site's blueprint, therefore, covers consequences, investigations, community and ongoing conversations with the future, the past, and the present. Further observation of storytellers as the subject found in the linkage of relationships from correspondences, views of observation or science, bias and unbiased perspectives, triangulations, objects, and even, unfortunately, toxins have arrangement within this blueprint. (Öhman, 2017; Rapport, 2017; Nolan, 2017; Gibbs, 2012)

Found by my analysis, the subjects weave the stories in sometimes visible (and at other times, not so apparent) ways; as if their plots were sunlight flickering upon ripples in the water. All stories, regardless of plot linkage, only require that they speak toward the more accurate telling of the meta-plot. The meta-plot being, again, to advocate on behalf of change because it is always happening if we try to control it or not. Therefore, the levee stories' oeuvre is that of a continuum. The storytellers may not always be in collaboration but still coexist by this language of the humanities (art) which can and does endure, written or not, verbal and nonverbal (Öhman, 2017; Rapport, 2017).

Levee stories take different forms such as reports, field notes, and interview transcripts and continue into becoming music, myths, and our memories. The stories though are not all songs, tales, and remembrances. The stories ultimately can and are as wide-ranging as the exchange of ideas (art as language) as seen in the stories I have communicated in the prior sections (Rapport, 2017). Stories, again, are the reference; a

frame in which to present the artwork, the RCFCP-HC. The framing allows the sorting out of, and understand towards, help with a shared goal which, at this time, is for an expedited reconnaissance study to happen (2017; Nolan, 2017).

For example, with placing the Army in the storyteller role, I utilized the bravura for which I first became interested in learning about the levees to write the Orick Myth. I pull from the created landscapes of influences found from material in my research to help with sharing of this myth. This co-authorship begins to reveal what has been taking place since before time began. This happening is the linkage (or connection) between energy to all material, what I chose to specify, through science tendencies unambiguously, is still and will remain that of art. The typescript of the myth is the following:

Army tells about coming to The Valley after the Floods

There is plenty of creations that make up our universe. Some we may not know but believe are good, some we are aware, but may not believe in, are bad. Most of them are both. In the story I (or we) will tell you, it's important to remember that this dualism framework, the anthropologist would say, is part of the homo narrans (the storytelling ape) linguistic fitness landscape of our times. Plus you may think you are one in this story but because of an environment, the genetic makeup, you all are a conversation of two or more all the time. Yes, we, ghostwritten biographies- some piece of work we are, such as dialogue.

One day we came to Orick to help. The sky rained and rained and rained. The ground was full of water. The trees, well, you cut them all down almost. But when we arrived, you were happy to see us. And we seemed to know just what to do to make things better. I am not sure; maybe we did make things better? But are people things? Water is the life you say, which also means, it is death at times. And we wanted nothing to die. Not no one, but nothing at that point. We did not understand that part of it, and we still do not really.

Still, you all welcomed us. You all that is we, which is us. And us with ideas and maps and papers and hard hats. Plus machines and trucks, it is an impressive show. Nothing like it since the circus came through years ago. And we went to work. And boy did we work. Blocking off and redirecting Redwood Creek, like kids cooped up all winter playing hard in a sandbox when spring finally arrives. Moms are so happy in the spring. Anyhow, we all thought, at that time, it was grand, even you.

And you agreed, which was us, to allow you all to take care of the sculpture we all call levees knowing we would come back to fix it if you all let it go or forgot or could not do it. Some of the little ones may have known to be scared at this time, but we only looked like a monster to all of you for the show. We did not understand, and still, do not, that we, which is us, can transform into a monster that the younger old soul probably saw.

The point being that to overcome us, which you all think has abandoned you or let you down, we have to realize that you all are us. We are not separate from you. You fund the activity; you clothe us, even feed us. Hell, you created us. You all is us, so understanding the roles we all play could help when writing reports, government request, conducting research or drafting the new policy for the RCFCP-HC. You, which is us; young, old or whatnot, are the influence that creates levee stories, whatever they might be. It is important. And that is what it means to have significance.

And, that is it. The new, as well as, the old lessons learned from the RCFCP-HC. The good, the bad, and the ugly of it. Art does not always have to be pretty. Sometimes the raw and real of it is why, well, that it is Art! So, what will happen next?

DISCUSSION

Observed throughout various levee stories was a misguided romancing regarding the use of the land in Orick. Whether it be longtime locals glorifying an ecologically dubious past or a young entrepreneur seeing this small town's great potential, The Valley tends to bring out intense emotions and reactions in people. In the reality of Orick, the majority of the structures remaining pre-date the major floods that took place in the middle of the past century. These structures include the school, the last indoor restaurant and the only gas station with one old environmentally questionable pump. As pondered earlier, are the resources and infrastructure available for Orick to function? Do the benefits outweigh the cost to bring the Army to fix the levees or to build a new visitor center to welcome guests into the community? From the economic and environmental viewpoint, they do not. Could alternatives be found and compromises made? Let's look at options The Parks could utilize instead of building a new visitor center at the Orick Mill site, as an example.

The Southern Operation Center (SOC) for the RNSP in Orick appears to be suited to serve as both an operation center and as an information stand, which would essentially be a free Wi-Fi provider for the global population that passes thru The Valley. Could the resources and funds go north to Crescent City, California who already has a welcome center that could be improved and updated? Also, what about removing and not just closing the current visitor center from the estuary's transition zone? Is that part of the

Parks plan with the new build? And if so, when exactly will this part happen and with what funds? Doing so would help the park comply with its mission.

The park could set up the information station at the SOC and give the funding reserved for the visitor center to the county to reinstate the estuary function. The Prairie Creek State Park, likewise part of The Parks but north of Orick and closer to the Klamath River, offers even further alternatives for rerouting of funds for improvements. Choosing an alternative route other than where The Parks have agreed to source finances appears to be a more useful approach to safeguarding the old growth tall trees. These trees, forest, and the waterways which, in fact, are caring for us (and not the ego drove reverse) might be better off by us not rebuilding on the former Orick Mill Site. Making The Valley into a greenway, not the gateway, may be a route to take that would be more environmentally conscious, scenic, generationally advanced and more compassionate for our futures (Wilson, 2016).

Ethics

Numerous policies are casting a shadow over The Valley. These include county, state, and federal laws relating from pecuniary to environmental matters. Orick might complete its extinction ultimately due to the restraint these policies have over the town. But ethics, like all things, change. If the RCFCP-HC systems management (which is Orick's current dogma) are preventing principal beliefs about the levees from changing, something needs to give. Negotiated measures with fixed platforms (which ethics are) require a change for survival. Thru change is how values work within a society and how

one reaches towards health (Mannay, 2015; Edel, 2017). An open-minded approach towards the old policy regarding the RCFCP-HC is what has to occur (2017). The following are some examples of this conversation which needs further discussion.

Where Diversity with melody in Reports Could Help

The County of Humboldt wanted, in its 2014 report, the levees rehabilitation and restoration of the estuary to take place (DEH, 2014). What would be the slated state of return for the waterway? Pre-park service? Pre-contact and settlement? How would that be possible? Will the responsibility default ultimately to the National Park Service to take care of the levees? The terms rehabilitation and restoration often can become interchangeable. They additionally can be interpreted with hostilities by a community receiving them without a vigilance towards the clarification behind the intention of their use (Edel, 2017; Rapport, 2017).

A similar type of discourse comes in not knowing what measurement for metric the RCFCP- HC is supposed to adhere. One can easily claim, as a former Army General did, that the levees in Orick worked for close to 50 years now; though not in the manner that most would like them to. Therefore, to implement change a standard for the practice of what will work for Humboldt needs to be voiced and defined before new designs happen. There are several other examples of Lexis non-medley which the County used throughout the 2014 report, resulting in a strain from their realms of expertise. In excluding components and participants of the levees' management theater (which I observed as its aesthetics), what occurred was a forfeiture on strategy. Overlooked were morphological patterns in the manuscript that included the overdoing of the simplest

rapports such as the levee and estuary. The relationship stress causes an underuse of fuller vocabularies for richer descriptive headings that might not have missed history and other considerations for and in the environment that it did, which all still need deliberation (Nolan, 2017; Edel, 2017; Eriksen and Nielsen, 2017).

Shifting Perspectives and an Additional Causal Study Request

An inheritance of complications is not without possibilities. An issue, being rooted in poor communications and being ignored for decades, often evolves into the "blame game." A flaw, seen as a problem and admittedly a mistake, generating no action to correct it would ultimately be where the fault lies (Edel, 2017; Yang, 2016). This failure (in communication) will continue to exist if nothing happens to fix it. A shift for all co-authoring of the stories involved with the system needs to occur. The modification, or change, should let everyone know the network works better from a protectionist position and not that of an oppressor. To endure as humans, thinking from this empathic based perspective needs to transpire in systems management (Edel, 2017; Aucoin, 2017; Yang, 2016)

The RCFCP-HC's purpose was to be a system built onto an already altered estuary. Welcomed by a community that believed it would create an ideal form for promoting its betterment, which has not happened. After this had occurred, the transition zone collapsed. The failure was not the fault of any one entity, but a common occurrence due to a manifold of cause and effect elements tortuous in the ebb and flow of space. In current working science, the eleventh law in systems thinking is that there is no blame. The flaw of the RCFCP-HC into the estuary that happened from a mistake which was by

accident judged as a fault leading to denunciation is erroneous reasoning (Senge, 2016; Corballis, 2017; Snowden, 2015; Staddon, 2016). Trying to place responsibility for the mistake is not part of my goal.

My claim is that the problems: the levees' function, the estuary's health, and the toxin's location from the bridge, need examination separate from each other and as to how the three adjoin. The reason why this is necessary is that the problems' scopes, ranges, and dynamics contained are so immersive and complex (Snowden 2015; von Benda-Beckmann, 2017; Weideman, 2017). The speculation and confirmation from participants in my original qualitative research indicate that Lead (Pb) exposure occurred in Orick. The sharing of this overlooked critical information with the current agency's official in charge of the levee system and the chairmen of the OCSD befell me; hence I informed both accordingly (Nolan, 2017; Handbook for HSU Graduate Students, 2017; HSU IRB Policy for the Protection of Human Subjects, 2014). A supportive causal investigation for the toxin, which we will call survey 'X,' will need to take place to check if contamination of Lead (Pb) remains near the levee. Also what prior (and possibly continuous) exposure to Lead (Pb) has occurred in Orick from this admitted exposure?

If toxin exposure is the direct cause of any past or current health issues with residents (including the children that attended the elementary school located in the bridge's shadow), area visitors, bridge, military or agency workers, its impacts on those involved would need investigating. The findings identified will need to be considered as to how the effects should affect future intentions for land use in Orick; before any fallout due to unregistered suffering results (Snowden, 2015). The point is that if the new visitor

center, scheduled to break ground in 2018, despite not knowing whether the lead (Pb) is still a factor of concern within the area's environmental trauma, continues its course will be unethical and, in turn, immoral. Not providing the findings of the lead (Pb) used would only contribute to greater human rights violations taking place in The Valley. It is the role of the "stories" told, herein, to represent this lesson or make apparent the significance of it, for the RCFCP-HC (Edel, 2017; Rapport, 2017; Weiss, 2017)

So again, to be clear, the causal toxin study known as survey 'X' would be a different investigation to be performed before the reconnaissance study by the Corps. Independently, the 'X' research needs to be done unlike past collaborative efforts such as USACE working with Caltrans, OCSD, Humboldt County, RNSP or any other closely tied organization to the region, to reduce bias. A Science to Achieve Results (STAR) grant and fellowship apportioned by the Environmental Protection Agency (EPA) is an option and may be the best route for this survey. The EPA, who already works with the Yurok People, are familiar with Orick and just recently rewarded Klamath two STAR grants. Another STAR grant and fellowship, or working from the awards already allocated, could provide for the Redwood Creek estuary enough to receive the critical investigation that it needs (www.epa.gov/research-grants).

CONCLUSIONS

A subsequent recommendation for the RCFCP-HC may include what the DEH 2014 report was titled: Soil Remediation. Collaborations within systems management of the community will be better after survey 'X' as long as 'X' is ethically sound. Neutrality is the EPA's role or its tuneless cipher. The EPA, though a part of the systems management for the RCFCP-HC, would need to remain in their impartial oncologic role within the levees' contrived monologist nucleus. The role is one of the EPA's core principles, that of whistleblower, and should not be difficult for them to perform (www.epa.gov, 2017)

The reconnaissance study for the RCFCP-HC, ideally, would need to take place only after survey "X." The Army needs to be held responsible for the mistake made towards the landscape in spite of the past deception done to Humboldt County. The Army's observational study would need to be done soon due to the condition of the estuary's health. In regards to safety concerns, the Army also needs to know the results of survey 'X' to make a complete report reconnoitering the area (Moshman and Tarricone, 2016; Gallagher, 2017).

Where I think the RCFCP-HC needs steering is not solving today's problem with the ripostes of yesteryear but looking for tomorrow's responses to challenges before they get here (Simonovic, 2017; Snowden, 2015; Senge, 2016). Branches within the US Army Corps are in place to examine cases such as the RCFCP-HC, but how do systems management catch up to the outlets within the Corps for a change to happen? Providing

these stories allow for the opportunity for this investigation to be done and to help to find out what needs to happen (2017; 2015; Rapport, 2017; Nolan, 2017). That was my part, and that is what I have done.

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APPENDICES

Practice Narratives Memos

Deputy Director (WM) of Water Management Office Eureka, CA

Division of Environmental Health (DEH) Water Management Humboldt County

Friday, April 15, 2016

DEH Memos 01-014

DEH Memo 01 Access for Permission

Lines 1-8	<p><i>KB: Hello, I am recording this interview, is that ok?</i></p> <p>WM: Yes</p> <p><i>KB: Hi</i></p> <p>WM: Hi</p> <p><i>KB: Would you be willing to share your knowledge about the history of the levee system in Orick?</i></p> <p>WM: Yes.</p> <p><i>KB: Please explain your knowledge.</i></p>
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DEH Memo 02 Effects of Levees

Lines 46-51	<p>WM: I have a lot of regard for Orick... the people there, the community. And it has been one of my top priorities... of my career the last ten years trying to help Orick on different initiatives. And certainly... kind of the levee runs through it in terms of... really effecting everything. What I was going to look for quickly if I had the, a... (Pause)</p> <p>(click-click, noise of computer mouse)</p> <p>...The resolution from when the County accepted the, maybe I should just make a list of things to get you.</p>
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DEH Memo 03 History of the Greater Area

Lines 53-65	<p>WM: A foundational document is the County resolution which accepted responsibility for the levee. There were big floods in 1953 and 1955 and they effected a lot of different places... including Orick. And that initiated the Corps of Engineers to start looking at opportunities for levee systems... that is the solution to the problem... and the Corps... the Federal government was in the levee building business. And so the first levee was at Blue Lake and then down in Fortuna... on the Eel River and then... in the late 50s and early 60s they started going for Orick... and so they had a levee system planned... when the 64 flood hit... they began construction shortly thereafter and then finished in 1968. And so, (rubbing hands motion) its challenging to have a community in a flood plain and our understanding of a flood plain today is different than what it was when Orick got settled. Also, our understanding of levees today is different from what it was in the 50s and 60s. The Corps of Engineers offered to design and build the levee, the county was the local sponsor. The local sponsor had to provide right away and agree to operate and maintain the levee. Humboldt County Board of Supervisors agreed to those terms. There is a third term as well... you have to hold the federal government harmless.</p>
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DEH Memo 04 Impacts of Language

Line 67-78	<p>WM: I'll show you the resolution, you can see the language for that...</p> <p>(Pause)</p> <p>...The right away was obtain... I think at that time... Orick had at least one mill.... there might have been other mills... there where multiple dairies... and it was a vibrant place. And there was the expectation that it would really help to bolster that community... initially the design went through some changes... a shorter levee system was envisioned... and then it got lengthen to go into the estuary in a subsequent phase and really the rationale for that was a desire to have a constrained channel that theoretically would lead higher velocities that would have more stream power to convey sediment loads to the ocean rather than depositing in the lower river. So that was the rationale. So it was not to protect the lower portion of the valley... it was to convey sediment... Because really the levees where intended to protect occupied structures. I think it is pretty clear now that in retrospect that was a design flaw.... And yeah, they also didn't really understand the attributes and processes of an alluvial river system, and the sediment transport and...</p> <p>(11.35)</p>
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DEH Memo 05 Changes Over Time plus Environmental Laws

Lines 78-87	<p>WM: They were designing for a big flood event but the reality is small and medium flood events are part of the whole spectrum of flows that the levee system sees. So really the levee system was not designed to convey sediment, there was an assumption of a static cross section... we talk about that in the report... or if it wasn't going to be static... big floods were just going to flush everything out... and so they kind of wanted to have it both ways. That is kind of the formation of the levees. You know, that was before environmental laws. There were some comments from Fish, Cal Fish and Game at the time expressing concerns about fisheries but there was no compliance process... no NEPA... no Clean Water Act, no Endangered Species Act, no Coast Act. In the early 70s, you know the County maintain vegetation by spraying pest herbicides... then there is this long history that we actually document in that report of the geomorphic changes.</p>
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DEH Memo 06 Cause and Effect

Lines 97-105	<p>WM: There is different opinions on you know, cause and effect... I think one of the key mechanisms was over bank flooding on the north side that would... Redwood creek would flood and then the water would be conveyed westerly and then it would flow into channels that would enter Sand Cash Creek and the north slough and then flush out the sand. So there was this dynamic... a dynamic equilibrium... and when the levee was built there was no over bank flooding so Redwood Creek water never entered the head of north slough... there wasn't enough stream power to flush out the sand that came in... and then the sand and the woody debris caused the back water... and then the invasive....</p> <p><i>KB: Species took over?</i></p> <p>WM: Yeah. It kind of unraveled at that point.</p>
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DEH Memo 07 Previous Intervals- Unknown Bridge History

Lines 123-132	<p>WM: If I could, maybe I will go back to '98 just quickly to set the stage for today... so, in the 70s here was herbicide application for the vegetation.... there is also observation that gravel was accumulating in the channel (Pause)</p> <p><i>KB: The bridge too.... there was a problem with Lead (Pb) right? A resident told me it was Lead (Pb)? They covered it and found lead so it turn into this whole thing?</i></p> <p>WM: I don't know that history... it (the bridge) was replaced... I don't know the timing of that. (Pause)</p> <p>But the other kind of development was related to Redwood National Park and the bypass road and the realignment of 101... there was a need for agitate material so there was a major dredging of Redwood Creek to provide that material. (20.49)</p>
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DEH Memo 08 Human Intelligence and Need for Digital Archives

Lines 132-134	<p>WM: (referring to the Bridge question in Memo 07) I forget exactly when that happened, I would say the late eighties. One of the effects that it had was, let me just look at something, cause this is related because of the... is it there... could you open that Redwood Creek Levee #2 Drawer?</p>
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DEH Memo 09 Estuary Invasion Summary

Lines 173-178	<p>WM: Great, so I think that report conveys... it really documents the design flaw... which was... the design lowered the bed of Redwood Creek thinking that that would be static but the creek wants to hold its grade. (26.54) You can't alter the grade of a river...an alluvial river will go back to where it wants to be. And so... (Pause)</p> <p><i>KB: Resilience?</i></p> <p>WM: Yes. (Pause) Yes.</p>
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DEH Memo 010 Maintenance and Environmental Impacts

Lines 179-210	<p>WM: You know the other issue is just the alignment and the meanders that... the alignment of the levee altered the meander frequency of the creek and that has implications on how sediment is transported. So the bottom line is that the levee has experienced reduced flood compliance capacity... and so that led into the nineties and that wasn't being adequately taken care of, or maintained. Now the issue there is that the County in the early sixties... when they agreed to be the local sponsor... they never agree to and it was never disclosed that there would be this need for massive gravel removal on an annual basis. So, that is not maintenance- that is a sign of a design flaw- and a need for rehabilitation and a need to get a more sustainable system. But the County did pursue efforts to try and remove gravel to trick the vegetation in the 2003... 2000, you know... that decade... and it was just when the environment laws were evolving and becoming much more prescriptive and much more effective. And so as a result, there is a lot of limitations on what work could be done. The County also has very limited resources. And just as a side note... other levees... that receive a high level of maintenance... typically, they are protecting large municipal areas... see if you look at Sacramento you are protecting hundreds of thousands of people, lots of infrastructure, lot</p>
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	<p>of economic development and typically what happens is... there is an assessment.... a benefit assessment so that the properties that benefit from the levee could then contribute to funds to the cost of that maintenance. And that was never set up for any of the three county levees that the Corps built. I think there was a presumption that there would be limited maintenance but now there is no financial contribution from any of the land owners for any of the levee systems... in Blue Lake or Fortuna or... for levee work. You know even if there was... you know for these small communities it would be very minimal... and it wouldn't pay for moving tens of thousands of cubic yards of sediment every year. (Pause)</p> <p>So, you know the County did try to pursue gravel and vegetation treatments... some work was done but what has really happen now is that has all... the regulatory requirements have squashed it. It just has become too burdensome. The county has applied for permits to do work.... and that work was not to restore it back to its original condition... that work was just to try to make some improvements to maximize the safety of the community in the short term while a long term solution is found. But you know... in 2010... we applied for a permit to the Corps of Engineers... they have jurisdiction under the Clean Water Act. (Pause)</p>
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	<p>For a permit to do work. The Corps has to consult with National Fishery Service under the Endangered Species Act, and the National Fishery services has not completed their analysis.... Six years later.... It's frozen. It stalled out and I don't know if there will be any break through on that. Typically, what I am anticipating is that they are going to required very strict conditions and limits... I don't knw if it is going to be feasible, economically feasible to compile with all that.... All those conditions.</p>
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DEH Memo 011 Fishery Report

Lines 211-231	<p><i>KB: The Fishery Report that they just put out... for all of Southern Oregon and Northern California, did that...</i></p> <p>WM: The Coho recovery plan?</p> <p><i>KB: Yes. Did that have any of reference to, I mean it had a reference to the levee but was it...</i></p> <p>WM: It did.</p> <p><i>KB: Was it helpful? (WM starts to shaking head no)... or it was not helpful for anything to be done? Because it is to protects the fish, right?</i></p> <p>WM: Yes. (Pause)</p> <p>Right. So there is a whole dynamic working with the Corps and the National Fishery with this that I, there are a lot of issues, underlying issues there.</p> <p><i>KB: That they have to do?</i></p> <p>WM: Well that, I am not going to get into.</p> <p><i>KB: Ok</i></p> <p>WM: Just because... [Pause]</p> <p><i>KB: It is not your job... You don't need too.</i></p> <p>WM: No, I guess what I am trying to say is that (pause) that is kind of</p>
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	<p>its own layer and I have some.... grievances with how the Corps and National Fishery service are responding to our request for permits.</p> <p><i>KB: Ok</i></p> <p>WM: I am not going to get into that, but I want you to note (Pause)</p> <p>but actually, maybe it is relevant to your work? ...Because I don't feel like those two federal agencies are accounting for the unique needs of the Orick community. And they have not been sufficiently responsive to the County's requests for permits.</p>
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WM-HC Memo 012 Long Term Solutions

Lines 234-273	<p>WM: There will never be federal funds to have dredging done...there should be because it was a design flaw of the Corps. But I see don't see. Accountable. I think that is where it starts. But again, think about the design flaw. Money would be better spent trying to re-design and re-align the system so that it could have a sustainable level of protection that didn't require the high level of disturbance of gravel and vegetation. So that is where the County has evolved to, we need to look for a long-term solution. That didn't require these interventions that are really at a lower benefit cost because the benefits are very short term. You know you move sediment and it fills in right back very quickly. So if you think about a winter typically you are going to have three or four large flow events. Well, if you have done gravel removal to create more capacity that first storm is going to bring in sediment. So you lost your benefit and right away you have these other storms coming behind it. Very short term benefit.</p> <p><i>KB: What would be long term solutions that could help?</i></p> <p>WM: Long term solutions that our 2014 report identify were to, well, we are trying to address two things...from the County perspective we are trying to address our top priority is the safety of the Community...the flood safety...and we also recognize that the adverse effects that</p>
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	<p>have happened to the estuary because of the levee and so I think, what we articulated is a goal for a multiple benefit project that would benefit the estuary and benefit the flood protection. And what we have been looking is freeing the river at the lower end and reconnecting the river with the flood plain. So that would allow better conveyors of sediment through the system and also it would provide more conveyors of that flood water. And that would have the effect of upstream benefits of, you are essentially, opening a flood gate, “sorta” speak, so that, and that report kind of talks about how far up stream those benefits would propagate and it really depends on how much you opening you do. (Pause)</p> <p>You know it is tough because the levee has disconnected the creek from the flood plain. The landowners have adjusted to essentially not being part of the flood plain. And so their perspective, which I understand is to, be very considered about what could happen if their land was reconnected. (Pause)</p> <p><i>KB: But again, they are in a flood plain though really?</i></p> <p>WM: Yes, that is really the natural state. And if there was an opportunity to reconnect Redwood Creek with the flood plain... I am confident that there are opportunities to minimize the impacts and ensure continued utilizations of those lands. But it is a change. So, that</p>
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	<p>is where we are at in terms of, there is a need for conversations and planning efforts to talk with the land owners about their...</p> <p>opportunities where they would feel like their interest were being meant and also allow this reconnection, which would require setting back the levee at the lower end. One of the big challenges is relocating them, like on the north side, to relocate the levee onto Hufford Road, so the road would be on top of the levee. On the south side it is less clear what the optimal solution would be, we have had some initial discussion with <i>Family B</i>. And you know, I think they have come a long way in terms of what they would be willing to consider, and the dialogue has been really good and I, I appreciate their willingness to talk about certain things. One of the big challenges is just how expensive these projects are, and in one sense, you need to predict what the effects your project will be and that is just really difficult cause it is a dynamic system, that depends on the water year, how the system responds, and so...right now we are just a little bit stalled having the resources to dedicate time to look at different scenarios but I think that is the next step to get towards that long term solution.</p>
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WM-HC Memo 013 Past, Present and Future

Lines 290-296	<p>WM: You know, I think the fine coarse materials that would stay in the channel... it would be fine materials that could actually replenish the soils and help with adapting to sea level rise.... to help avoiding subsides of soils... I think that is big aspect of it also.</p> <p><i>KB: Yes, I was looking into archaeological wise, that if there was any writing from the late 1800s that talked about how if the floods came and it covered the land and it was awful for a season but then the next spring it was like the greenest, most beautiful place in the world, for the natural relationship that was there. I wondered if there were any writings like that... but I haven't found them (Pause)... well, not yet.</i></p>
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WM-HC Memo 014 America

Lines 298-321	<p>WM: Just, the last thing I will say on that is... I have a deep respect for each of those families connection to the land. And those connections are interwoven with their family history. And so, (pause) And I think, it is extremely important to acknowledge that and respect that part of it. And, you know I have benefited from listening to each of the families talk about their connection to the land and the roots run deep. (Pause)</p> <p>And so... they feel a strong sense of stewardship to the land and I think that is directly connected to their sense of loyalty to their ancestors and they are not looking at this in economic terms, which I think people often assume... it is just economics... but it is not. It is connection to the land... and family... legacy.</p> <p><i>KB: I always say America. But Not maybe U.S.A. but America. Like it is America there. That is what I feel there from all sides.</i></p> <p>WM: Yes, and I think you are also touching on for people in Orick... you know their perceptions of government and levels of government... federal, local, self. This conflict of taking out gravel and doing the vegetation... on one hand I think the regulating agencies have not paid attention or adequate importance to the flood safety of this small economic disenfranchised community and on the</p>
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	<p>other hand that work has really limited benefits... and the... we need to be looking for long term solutions because we are kind of in a grid lock right now. I think some people in Orick may feel that removing the gravel and cutting the trees is really important. It has small... it has very limited and temporal benefits and so...</p> <p>I would rather focus our collective energies looking for a long term solution then getting bogged down... Cause we spent a lot of money trying to figure out the permitting and it is really has not resulted in any benefits. It is still not even close to being resolved with national fisheries.</p> <p><i>KB: But there is also hope, so you never know.</i></p> <p>WM: I think over time there has been increased dialogue and that has been essential to understand new perspectives and yeah, so that is good.</p> <p><i>KB: And, as you said the issue is greater than the cost of money.</i></p>
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Fish Biologist (RN) Southern Operation Center (SOC) Orick, CA

Redwood National and State Parks (RNSP)

Friday, May 9, 2016

RNSP Memos 01-06

RNSP Memo 01 Access for Permission

Lines 1-17	<p><i>KB: Hello. I am recording this interview, is that ok.</i></p> <p>RN: Yes.</p> <p><i>KB: Would you be willing to share your knowledge about the history of the levee system in Orick, California?</i></p> <p>RN: Yes.</p> <p><i>KB: Please explain your history?</i></p> <p>RN: Yes (Pause)</p> <p>... I am a Redwood National Park employee and such have spent many... many years monitoring the aquatic resources and the estuary. And I have been involved in the starts and re... [Pause]</p> <p><i>KB: Research?</i></p> <p>RN: Yes, research, and permitting and management aspects of actions... other people's effects to bring this thing along and things like that. But you...</p> <p>KB: I am an applied anthropologist. I am interested in the story... the science stuff is usually all in the reports... but the story is often harder to get at... I am really curious about... so yes, your history...</p> <p><i>RN: History. (Pause) Well, I have spent a lot of time in the estuary.</i></p>
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RNSP Memo 02 Effects of the Levee

Lines 18-27	<p>RN: I have seen a lot of people... well, agencies... or people in agencies try to move the restoration along but it always seems to just, you know, there is an enthusiastic start from a person...or agencies...but then it kind of slows down once they...or it just doesn't move, and there is a lot of (unclear)... a lot of things have to happen before it moves on, and a lot for it is personality type stuff... and social-economic stuff... and agencies. And money and congressional action and politics, and so um, it is not like science or that, were you could just, you look at things and say, you know we are going to do it this way, it doesn't work like that. It just doesn't work that way. Because... everyone has different backgrounds, everyone has different values. Everyone is not the National Park Service. So, it is kind of a sad story.</p> <p><i>KB: Yeah, that has been my finding as well.</i></p>
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RNSP Memo 03 History of the Area

Lines 34-45	<p><i>KB: Do you see any hope?</i></p> <p>RN: I don't know you know... there are people... you know, the landowners, I don't know if we have the greatest relationship with them, and everyone is playing their cards really close... so no one is going to give away maybe what their opinions are... cause it could come back to haunt them. So I really don't know. And the fact is... that no one agency can be... or entity.... can drive the whole thing... it has to be consensus.... Because... like the park service doesn't own all the land down there. We have the mouth.... which was the former County Park.... and the middle island was acquired by Save the Redwood League... later on from <i>Family C</i> and deeded over to the park... but there are still other areas, that if anything was to happen... would be....effect... that are private. Not a future wish... but a past wish would have been was when they acquired the park that they would have acquired that private... well, they acquired a lot of private land back then... that they would have acquired that as an ecological unit... then it would have been much... much...simpler, to change, and restore. It could have been just one entity that did it... so... (Pause)</p>
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RNSP Memo 04 A Lemon on a Monday

Lines 46-60	<p><i>KB: From my understanding... any permits for work has to be done thru the Army?</i></p> <p>RN: Yeah, the Army Corps...</p> <p><i>KB: Even though... the County is responsible? Is that... was... the big crutch of this? The Army sold the County a lemon... built the levee on a Monday?</i></p> <p>RN: Right. (Pause)</p>
	<p><i>DB: (inaudible infant noise)</i></p>
	<p><i>KB: So working with agencies, how are they? The Army Corps?</i></p>
	<p><i>DB: (inaudible infant noise)</i></p>
	<p>RN: (RN smiles looking at DB) (Pause) The Army Corps is... they can't do work without money... that needs to be given to them through legislation. Where someone like us... you know... we have paid for studies before... but that is where it ends... they are not going to work on something that they are not going to get reimbursed for... you know they have a lot of things going on... so a lot of things... the San Francisco district... they are not going to... do... that is my opinion... but in the past... we pay for engineers or mock modeling and stuff like that. But in terms of changing the operations manual... you know it is</p>

	not going to happen unless someone re-writes policy. And they have set steps that they go through.
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RNSP Memo 05 A more real one

Lines 61-91	<p>RN: In terms of... the levee project was a congressional authorized project, and order to change it they have to get congressional approval, and there are certain steps, and a lot of ... there is something called a general investigation, which is the first step in changing anything... and they need appropriation... like a hundred thousand dollars... but also with that appropriation... the government is on the hook for... more studies, on down the road... and after Katrina , a lot of levee because of what happen down in New Orleans... things changed in terms of projects.</p> <p><i>KB: So what personally doesn't go into the report about the levee?</i></p> <hr/> <p><i>DB: (inaudible infant noise and crawling on floor around office)</i></p> <hr/> <p><i>KB: Oh no, what did you do? He is ripping apart your office. (DB pull file draw open, throws papers, KB moves DB around. DB pulling down knob on file cabinet)</i></p> <p>RN: (RN smiles at DB) Don't put it back up until he leaves.</p> <p><i>KB: We are going to wait on that one buddy. (Pause. Holds DB on lap)</i></p> <p><i>So my paper is on the myth of management... is it true in order to create good management you have to tell a better story?</i></p> <p>RN: Well, a more real one to make it better. I wasn't here when it was planned or built, but the feeling I get was that people in Orick wanted</p>
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	this project, because the floods in the past, and it was expanded so....
	DB: <i>(inaudible infant noise and back to crawling on floor around office)</i>
	<p>KB: <i>Sorry, I'm listening</i></p> <p>RN: And so... you know... They got a project that was appropriate for the time... size and scope....and engineered... you know that was the way they did it back then... there was no NAGPRA (Native American Graves Protection and Repatriation Act). But now there are two branches now with the Corps, one branch with engineers and one branch with more natural resources.</p>
	<p>RB: Hey</p> <p>KB: <i>Hi, will you take over for a second? (Picks up DB, hands him to RB)</i></p> <p>RB: Yes, let me have him</p> <p>KB: <i>RN, this is my husband (RB). He is going to take my son (DB) for a moment just so we can finish up. He just started to work for the Park Service.</i></p> <p>RB: Yeah, I work for the Park Service now.</p>
	RN: That is great.
	<p>RB: Careful buddy... ok... I don't have much time.</p> <p>KB: <i>It is ok, it is all ok. (Pause)</i></p>

RNSP Memo 06 The Answer is ~~Restoration~~-Remediation

Lines 94-110	<p>RN: The park was more active in the 80s... you know there was direction from Washington DC that said... do not let these people's land flood... and you know we would open the estuary and then close it... I think one year we did it like 22 times.</p> <p><i>KB: Woah. (KB whispers)... that's crazy. (Pause)</i></p> <p><i>Is there anything else you would like to share with me about the levee system at this time?</i></p> <p>RN: No... well... (Pause)</p> <p>Yeah... that is really not something that can or should be done. And then finally... we would continue to get these permits to get to do this little management... and then finally the regulator people said, you know, no more. The answer is restoration. And you know... I would never want to go back to what we had to do before because... it put us in a bad spot in terms of natural resource management and protection. And for politics sake... for land that would normally flood... you know, it is location, location, location. And so yeah... I am glad we are not doing that anymore. We did it... but people were not appeased and now a' days people.... they live with it. And that is an important... (Pause) But we need to go the extra step... you know if you look at the pictures from 1935... there was a lot more intensive</p>
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	<p>agriculture... you know row crops going on down there... without a levee... So... I don't know how things... why things change. I mean... I know the levees are needed to protect Orick... don't get me wrong about that. I think there is some latitude downstream.</p>
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Exhibit 1: Full Caltrans Transcript

1	KB: Ok... we are going to make this recording today... is that alright with you?
2	CF: Yes.
3	KB: Ok, great.
4	CF: And I am Charlie Fielder, I am district one director here at Caltrans, the district one
5	director here on the north coast here in Eureka. And this, Xiola, Kathleen C. Bromley.
6	KB: Yep, <i>Xiola</i> is an older name. <i>Xi</i> a nickname. Kathleen Bromley works better for
7	today. We can make this more official. Also, in anthropology, we try and aim at
8	protecting Human Subjects. There will not be any link to you unless... or to you in this
9	conversation unless if it is ok with you.
10	CF: Yes, you can reference that you met with me directly, I prefer that. You should do
11	so.... and that we had some conversations to some of the information...
12	KB: Ok, so you name directly is ok to use.
13	CF: ...that I can share with you. (Spoken same time as above) Yes, use my name directly.
14	You know, whatever is helpful there.
15	KB: Ok.
16	CF: But you started it out by saying your thesis is on the levee in Orick?
17	KB: Correct.
18	CF: And we are meeting today because you had some questions about the bridge?
19	KB: Yes, well, the bridge being part of the levee's history.... you are kind of getting
20	ahead of me. My question for all interviews that I have conducted for this study has
21	been... what is your knowledge, if any, with regard to the levee's history? Where in this
22	case would be the bridge? The Caltrans bridge that crosses over Redwood creek.

23 CF: Great, I do have a little bit of background in that area and I did some research for
24 you.

25 KB: Awesome, thank you.

26 CF: But you mentioned that there was a design flaw when the Corps of Engineers built
27 the levee? And I think you should probably be kind of specific on that because... um, my
28 understanding when they went to build that levee it was after we had a huge flood event
29 in 19...

30 CF/KB: 64 (said at same time)

31 CF: On the North Coast... and we have a history of flooding on the North Coast. You go
32 back to the '55 flood, 19... 37. I mean, there is a lot of water up here and when the
33 rivers fill up, you know, it is just like...

34 KB: Go time

35 CF: Yeah, just get out of the way. So my understanding was, the Corps of Engineers
36 did an extensive amount of mapping for flood impact due to that flood area in Orick,
37 which is in the Redwood Creek watershed... which was impacted significantly... just like
38 a lot of coastal communities were... and they um, were able to build some levees in an
39 effort to protect the town from effects of future flooding. I think they also talked about
40 building Damns... thank goodness that never really occurred... but you know that is one
41 of their other tools of managing peak flood events, which is just basically blocking off the
42 river with a big concrete or earth damn. But my understanding is that the levees have
43 protected the community.

44 KB: Yes. Your research parallels my own. Part of what you are saying comes down to

45	definitions. They protect Orick, but the estuary is what was impacted by the levee.
46	CF: So yes, I see. The estuary.
47	KB: It was impacted very much by the levee.
48	CF: So that is the flaw.
49	KB: Yes, the estuary. The flaw is the over-extension into the estuary. Please don't get me
50	wrong, I am not claiming to be opposed or Anti-Army Corps at this time.
51	CF: They are what they are.
52	KB: Well, that is one opinion. But think of me in this role as a neutral observer. I am a
53	researcher without a direct bias toward the agency.
54	CF: But I may be making an assumption here, but you said design flaw. So does that
55	mean if they had not extended it so far down stream into the estuary, the levee still would
56	have functioned as a flood protection for the Orick Community?
57	KB: It appears so. The army has admitted the mistake happening, that is why I make
58	reference to it. I can't speak for the Army Corps, but from interviews I have conducted
59	with the water management for the county, the Orick service board and Redwood
60	National... largely believe that if the area at the end of the levee, the estuary, was
61	allowed... the alluvial river was allowed to do its thing and be more natural, that
62	connection could be made back to the land... at the end I am saying, where the mouth
63	area is...
64	CF: That's Geomorphology, interesting. So what you have, the ways that rivers
65	function... you know they carry a lot of water... but within that water there is a lot of
66	sediment and bedload.

67	KB: Yes.
68	CF: And when you get into an area like Orick... which is... more naturally a flood
69	plain... you know you can have agriculture because of that... and the deposits of
70	sediment fall into the community... if you channel it, either the channel will fill up a
71	grade with sediment or if the velocities are high enough, it is going to keep it clean... but
72	when it gets to its outlet... which in this case would be the estuary... it will just spill
73	sediment out there too.
74	KB: Exactly, yeah. It all has been blocked up... so...
75	CF: So there was basically an environmental impact do to it.
76	KB: Yes.
77	CF: That part wasn't really anticipated.
78	KB: Agreed. (Pause) And no one really knows but everyone has a slightly different take
79	on how to fix it or how to correct it, or... so there's definitely still communication that
80	needs to take place.
81	CF: So kind of a famous quote... a saying that will go, I learned this when I was going to
82	school, back in, I went to UC Davis for my engineering studies but I did take some class
83	at the Humboldt State as well, and one of the quotes that I remember throughout my
84	career that I got at that time was um... (5:25) today's problems are the results of
85	yesterday's solutions.
86	KB: Cause and effect, Peter Senge, right? Number one in the eleven laws of system
87	thinking. I agree. That is an interesting yet tough one. I see engineering as an art form,
88	right? Gutzon Borglum was an artist first. Even if, well, his works being misguided, his

89	works...were not only massive but had a huge impact. The Army Corps are artists. I also
90	see the levee itself as an art piece, like an earthwork and in that...
91	CF: Quite a sculpture.
92	KB: Correct. And that humanity. Well wait, let me slow down. I am asking that if art is
93	the language of the humanities... what the levees are saying about us as a people... right.
94	So that is kind of my take on this whole thing.
95	CF: So this is a cultural study.
96	KB: Yes, but there are four fields in anthropology as you know, physical, cultural,
97	archaeological and linguistics. This study, appears to cross, at times, into each field for
98	one reason or the other. We just call it applied anthropology now a days. Like the name
99	of the estuary meaning mouth of the river is O'rekw which comes from Yurok.
100	CF: Yep...
101	KB: And is where I started with my research. And then there was an evolution of the term
102	into Orick, and well, so... there is all kinds of dynamics caught up in this one... so...
103	CF: Well, how can I help you? (6:47)
104	KB: Basically, my inquiry about the bridge... it actually came from an informal
105	conversation with a landowner in the area... it was mentioned to me that there was lead
106	(Pb) and that they had to cover it and that it took a while to clear? It was a pretty iconic
107	looking bridge... was what I was told... and well, they miss that...
108	CF: The old truss bridge?
109	KB: Yes, from the 1920s? Not the wood one. I saw a photo of it in the gas station.... the
110	only gas station left in Orick of how it use to look... there is a photo of it...

111	CF: Of the bridge?
112	KB: Yeah, so I think it meant a lot. The bridge as an artifact to the community... but it
113	was also an environmental factor that aided to... well, it wasn't of any health to the
114	community... like the broken estuary.... it doesn't add to the health of Orick... I'm trying
115	to put together the factors of why Orick is where it is at now....
116	CF: Well, not having the home and business swept away because of a flood event does
117	add to the health, so hopefully you will look at the benefits of having a levee...
118	KB: Right, point taken.
119	CF: I mean go to Texas or down into the south right now with the flooding... we just had
120	5 people swept away due to a flood event down there (08:13)
121	KB: Correct, even in Paris right now. I heard that they are taking out all of the art from
122	the Louvre.
123	CF: Yes, Paris is getting hammered right now.
124	KB: Right, can you imagine the Seine being that high?
125	DB: {inaudible baby noise}
126	CF: So probably some of the biggest impacts you can see to Orick is the fact
127	that people moved there. (08:36)
128	KB: Ok.
129	CF: Right... Settlers. That was the beginning of the impacts. And then settlers go ahead
130	and take steps to make it more livable or sustainable....
131	DB: {inaudible baby noise} (08:49)

132	CF: So they don't get chased out by, by floods.
133	KB: Yes.
134	CF: So the levee had a positive (08:57) benefit to allow people to continue to live there in
135	more safety and with less fear. If you look at some of the flood history in say the
136	Sacramento valley (09:07) ... the flood systems there... lives that where lost each
137	year because people would be asleep at night and the Sacramento river would raise up
138	and... all of the sudden.... just over flood the banks and all these farms and homes would
139	be swept away. There would be lives lost... you know... children.
140	KB: Yes, there is actually a story that Alfred Kroeber recorded from a Yurok member
141	that specifically warns against living there.
142	CF: Wow, ok
143	KB: Yeah, and that is because of it being a flood plain and so close to the ocean, it is
144	dangerous. (09:30) But man... human... thinks that elements can be controlled... and we
145	have been able to in some regards...
146	CF: Well, we try to adapt, that is what we try to do. Just like earthquakes and.... the
147	tsunamis (10:03) ...but you know most of the population in this country...
148	the concentrations are in the coastal areas.... whether it's the south coast, west or east
149	coast.
150	KB: The myth of solid ground, that idea.... from your job alone... you would know this
151	better than most humans. (Shared laughter) ... you know the roads.
152	CF: It is true. The old truss bridge, I believe was built in 1927.
153	KB: Ok

154 CF: And you know... it had problems throughout its life. Actually a number of problems
 155 in the 40s and the 50s (10:35) ... were it would be hit.... by trucks.... oversized truck
 156 loads... and we would have to go in...

157 KB: Right, I did hear that...

158 CF: Right and we would have to go in and make repairs on... on a regular basis. When it
 159 was built in 1927, it wasn't really anticipating the size of vehicles that were going to be
 160 coming in the 1940s and 50s.(10:56) ...So it was... a continuous maintenance problem...
 161 the other challenge... that we had... was that it was made of steel...and you are in a
 162 coastal environment so that requires again continuous maintenance of it... because you
 163 are in a marine environment... and as you know, just like old cars, they rust quite quickly
 164 when exposed to the salt air elements... and so we had to do a lot of sandblasting and
 165 repainting of that bridge.... and as a result in the olden days...

166 DB: {inaudible baby noise}

167 CF: Before we um, realized some of the materials that we were using were not
 168 healthy...(11:39) you know, it was lead (Pb) paint that was being used. I means... every
 169 wears. I mean in households.... homes and in windowsills, I mean, you're a mother,
 170 you probably still

171 KB: I understand, it was the standard back then you are saying?

172 CF: Yeah.... get the warnings about lead (Pb) paint on the windowsills, um, but... when
 173 we were replacing that bridge....you know obviously we had to do it with care because of
 174 the lead paint... because you have to dissemble it... um... but also the earth had to be

175	removed around it too and hauled off (12:14) to an approved location.
176	(Pause and noticeable quiet) (12:22)
177	CF: Did you notice that the new bridge came with a pedestrian pathway on it?
178	KB: Yes, I did see that.
179	CF: It is wider... it's a... it's a safer bridge. It is one that we are
180	not experiencing problems from the river any longer. But it has also help
181	to connect the community where before, the other bridge did not have sidewalks or
182	shoulders.... and it would have been very difficult for people to (12:49) cross it when you
183	have big trucks going across or cars. So, it actually helped to connect the community.
184	KB: So utility of the new one in the connection is the feature for community? I ask
185	because Orick still holds on to her nostalgic ways of the past it appears to me, like the old
186	hotel signs and (13:08) and motel signs, even though they are all falling apart....
187	CF: The Palms.
188	KB: Well... As if the era of.... Well... when the levees were built... they are not able to
189	let go of... and still hang on to this time. So even though it is a safer and better bridge, it
190	is still "we used to have this big bridge" is the memory... I have heard this from the
191	residents' a lot of times up there and in that memory was their community....
192	CF: Well, it's a different taste. Some people like less visual impact on the landscape...
193	(13:45) where this one is less of a visual impact because the old one was a big steel truss,
194	a big structure and its rusty looking.... so it has the old charm to it. (Pause) And it goes
195	back to other days... you know, like when you drive through Orick, like you said... it has
196	been a depressed economy there... and there has not been a lot of investment in the

197 community... so a lot of stuff is from a different time period... olden days... which
 198 actually does have an appeal all its own... it actually can have a lot of value too in the
 199 future if someone wanted to make it into a historic town someday. It has a great deal of
 200 history tied into it and continues to have.

201 KB: So you would agree though that the dynamics in the region are the Highway and the
 202 Creek. (Researcher makes crossing arms in x motion)

203 CF: Well, I will let you know that there is a paving job that is going to be going through
 204 there next year. (14:52)

205 KB: Oh yeah....

206 CF: You know it is just to keep the pavement in good condition... you know... it doesn't
 207 become deteriorated.... but one of the things included in that is going to be bike lanes.

208 KB: Oh...

209 CF: Because you can see when you get into the town center there is a lot of width there...

210 KB: Yes.

211 CF: ...And our idea is when you have a community that also has a state highway going
 212 through it... we are looking for ways to make it more compatible (15:19) and slow traffic
 213 down instead of having people speed throw... you know sometimes you do a paving
 214 project people think, oh, we have a race way....so we are going to be putting in some
 215 bike lanes and we are also going to be colorizing the shoulders.

216 KB: Oh nice.

217 CF: Well, it is not the 1950 look though, it is what you call, well what you see in a more
 218 livable type community so it will be a little bit of the new with the old.... but it will look

219	nice. I have seen some of the visuals on it.
220	KB: Well, things are changing up there, almost daily. So... but people live there now.
221	CF: Right.
222	KB: You said a more livable... I am just reminding you. (16:05)
223	CF: And you are familiar with the relationship between the Redwood National Park...
224	DB: {inaudible baby noise}
225	CF: and the community?
226	KB: Yes, actually that was my first thesis topic idea. But I realized quickly that that
227	might be too large of a topic to cover for just a thesis. But the southern operation building
228	on the 1 0 1 does stand out from the community, it has a visual impact.
229	CF: Yes, it is quite the building....
230	KB: Right, so the side walk in front of it... or not in front but the SOC is literally elevated
231	above the rest of the town... from the theater and the palms.... so all the run off goes into
232	the theater and they are always sand bagging... that seemed like
233	a disconnect from community on the federal level... I did wonder what is up with that...
234	but yet again, that might also be another thesis or at least question for a later time. So
235	yeah, the divide in the population is fascinating and very perplexing.
236	CF: So how long have you been in this area
237	KB: Only a year and a half.... not too long.
238	CF: So, I am from the bay area originally, but I came up (17:24) in the early eighties....
239	and left to finish up school... but then came back in '88 to work for the state... but that
240	was right in the middle of the Redwood National Park bypass that was being built and

241 part of the bypass was a result of the establishment of the Redwood National Park and
 242 that is where you saw a big change and well as an economic impact to that community of
 243 Orick. They had I think two sawmills going at the time...

244 DB: {inaudible baby noise}

245 CF: ...But the establishment of the Redwood National Park took a huge track of timber
 246 out of production and put it... for good reason... into protection for future generations....
 247 huge tracks of old growth Redwoods trees... so the community felt that they didn't have
 248 much say in that, it was sort of a national (18:19), even an international type of..
 249 um... thing that was hoisted on them. And from that point there was this, um.... there was
 250 a separation between the community and...

251 DB: {inaudible baby noise}

252 CF: ...And the government. You know... so... it has been our experience that, that the
 253 community has a very independent mindset... libertarian... you know... you probably
 254 have experienced. And you know they don't really look to government to solve their
 255 problems, they see them maybe (18:49) as the problem.

256 KB: Right.

257 CF: We have experienced the same thing with the community and the state government at
 258 times.

259 KB: Ok.

260 CF: You know, we try and work together, though.... you know we had a challenge with a
 261 piece of right away south of that Community.... you know... at the freshwater spit...
 262 you know, it was... I think, slated to be an expressway.... a four-lane expressway

263 someday, that is not going to happen, we decided that it was not feasible to build a four-
264 way express lane right through there and through Orick.... um... so that was taken off the
265 books, but you know they had a piece of right away there were campers came from
266 around the nation and set up camping, which seemed like a great idea till we started
267 getting notifications from the department of public health and from the sheriff's office the
268 impacts that were happening to um... discharge of waste, human waste onto the beach...
269 um, social problems, you know with fights going on.... among the campers, it was
270 basically a free for all, it wasn't like mom and papa camping for a weekend or two weeks,
271 it was basically residents stay, there was a school bus that was towed in that didn't have a
272 motor, that was just planted there, so... we entered into a partnership with the Redwood
273 National Park and they took over the management of that section. Of the land... we have
274 a long-term lease with them to do that... but that caused a lot of...

275 KB: Division?

276 CF: Yes, some of the business people were better unhappy with (20:43), were very
277 unhappy with that because basically, that was the customers there that help support the
278 businesses there.... so... we worked with county government to see if there were ways to
279 establish a park or some type of a campsite... they had something at one time and then
280 that fell apart.... we will not get into those details either but you could research, I think it
281 was called redwood resorts was what it was called. (21:07)

282 KB: Ok, I watched a film, well, there is a 10-minute film about that spit on youtube but
283 there...on the freshwater spit?

284 CF: Yeah, oh...

285 KB: But then there is a longer 48 minute film that the filmmakers made of that era.... it
286 shows the RVs and campers...

287 CF: I would love to see that if you could download a link to me.

288 KB: Yeah, I will. It showed the divide of the community that you spoke about in a similar
289 area... if I may... in the overgrowth now of the levee system... there is homeless
290 encampments in there....

291 CF: Really?

292 KB: Yes.

293 CF: And whose property is that? The county?

294 KB: Yes, it would be the county. I was wondering, do you ever have to deal with this
295 issue (22:04)...

296 CF: Usually, we will get calls if there is a homeless encampment that is becoming a
297 problem for a community... we will usually get a call from somebody that has noticed it, I
298 mean, most times our maintenance people take care of these things.... pretty quickly....
299 but yeah, I don't have any knowledge of problems around that area, usually it is around
300 the Eureka, Arcata, or Fortuna area.... and then down by Garberville. For the homeless
301 camps....

302 KB: So you have a set policy for what to do?

303 CF: Well, it is state property set aside for transportation purposes.... so it is not for
304 residential, livable camps... so you will see...if they are allowed to be in a place for an
305 extended period of time... you start seeing different types of impacts, including social
306 impacts too, but you see... environmental impacts... you know... fires that can get out of

307	hand, you know.... it just can be a bad scene.
308	KB: I walked the levee last year 2015 in November and witnessed encampments (23:26).
309	There was a mom with her kids down there... someone had nets across the creek catching
310	salmon.
311	CF: Oh nice. (Pause) They aren't native though.
312	KB: I don't know... they may have been. (23:43)
313	CF: Well, they could be, right? If Yurok there, they would do that.
314	KB: The encampments...
315	CF and when the rains come?
316	KB: In January? Yeah, it is washed out to the sea maybe?
317	CF: So maybe some of these people are the folks that were also camping along the spit.
318	KB: Possibly, that was home. The attachment to land, the attachment to home. A
319	stewardship occurs at times maybe even against ones will for home. (24:36)
320	CF: It is too bad because I think everyone desires to have a safe place to live and shelter...
321	but it is not a problem that is unique to this area, and it is actually a nation-wide problem.
322	(24:48)... in a first world country.
323	(Pause)
324	KB: Well, thank you for your time. I really appreciated the conversation, do you have
325	anything else you wish you share...
326	CF: Well, I was looking through some books here and this is just... the ferry over a
327	Robinson Rancheria.... (CF begins flipping through book...KB was unable to see title)...
328	KB: Oh cool.

329 CF: But I didn't really see anything on Redwood Creek... I looked up... they talk about it
 330 but... for Orick. That's princess rock as you go up into Trinidad.... you have seen that.

331 KB: Yeah we have.

332 CF: There is a native legend on that too... it seems like a lot of areas have similar
 333 legends....

334 KB: Yeah, you think so? The Yurok one I mentioned involved falcon, their hero. My
 335 understanding is that stories for Yurok are told by men... but, this came from Kroeber...
 336 it goes that falcon... Oh look, there is Orick.

337 CF: Yeah, Orick 1950s, kind of looks the same.

338 KB: Well, kind of....

339 CF: And you can see, all that pavement.

340 KB: Wow. Yeah.... lots of road. (Pause) So yeah, where the mouth of the creek is, was
 341 Orick, but to the south, the story goes that falcon told seagull to tell the pelicans.... well,
 342 with indigenous, frog is cousin... rattlesnake is friend... he lives in the wall, right?... So
 343 told seagull to tell pelicans not to fish there because his children had died at the mouth of
 344 the creek, and that is what these rocks formations are supposed to be, at the mouth river
 345 there...

346 CF: Oh, at the mouth of the river there...

347 KB: Yeah, see in the photo. And falcon is the main hero for the Yurok.... for the Yurok
 348 people... but so... yeah, falcon gave warning thru seagull but the pelicans were like, who
 349 is this falcon guy? He can't tell us what to do... so they just carried on fishing there
 350 anyway... and falcon got upset.... he flew directly into the pelicans mouths and killed

351 | them... so war... and the area carries that weight... because of the deaths that happened

352 | there... first, his children and then the pelicans not listening. But, now...

353 | CF: Now there is a community there.

354 | KB: In the valley, yes....but the warning is for the estuary... and the mouth of the creek.

355 | Even last year, people still died there. So, yeah, we are probably still are not listening to

356 | what is really needed for it... (Pause) what a sad thesis.

357 | CF: Well, ok well...

358 | KB: Yes, I will say thank you now and it was a true honor Sir.

359 | CF: Yes, same. Thank you Mrs. Bromley. (28:06)

360 | End of Interview.

361 |

362 | Note: Charles (“Charlie”) Fielder retired from Caltrans in September of 2016.

Copy of IRB Approval

**MEMORANDUM**

Date: 3/7/2016

To: Rebecca E. Robertson
Kathleen Bromley

From: Carrie Aigner
Institutional Review Board for the Protection of Human Subjects

IRB #: IRB 15-155

Subject: Levee Stories: Myths of Management

Thank you for submitting your application to the Committee for the Protection of Human Subjects in Research. After reviewing your proposal I have determined that your research can be categorized as Exempt by Federal Regulation 45 CFR 46.101 (b) because of the following:

Your research will involve the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interviews procedures or observation of public behavior, and that information obtained will be recorded in a manner that the human subjects will not be able to be identified directly, or through identifiers linked to the subjects; and any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

The Exempt designation of this proposal will expire on **3/6/2017**. By Federal Regulations, all research related to this protocol must stop on the expiration date and the IRB cannot extend a protocol that is past the expiration date. In order to prevent any interruption in your research, please submit a renewal application in time for the IRB to process, review, and extend the Exempt designation (at least one month).

Important Notes:

- Any alterations to your research plan must be reviewed and designated as Exempt by the IRB prior to implementation.
 - Change to survey questions
 - Number of subjects
 - Location of data collection,
 - Any other pertinent information
- If Exempt designation is not extended prior to the expiration date, investigators must stop all research related to this proposal.
- Any adverse events or unanticipated problems involving risks to subjects or others must be reported immediately to the IRB (irb@humboldt.edu).

cc: Faculty Adviser (if applicable)
Institutional Review Board for the Protection of Human Subjects

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IF RELEASOR IS UNDER 18 YEARS OF AGE: I am the parent or legal guardian of the minor Releasor. I have read this release before signing; I understand the legal consequences of its contents, meaning and impact; and I freely accept the terms on behalf of the minor Releasor and agree to be bound by the terms of this document.

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Project Notes

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Revised 2/16

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Survey Questions with the Escorting Capital received

Question 1: Is the levee system in Orick important?

01-01: If you lived in Orick in the 50s, early 60s when we had the floods it was terrible. Homes and valuables were destroyed if you lived in lower valley.

02-01: Orick will flood without the levee

03-01: [intentionally left blank]

04-01: It is very important. The most important structure.

05-01: It is the most important asset Orick has.

06-01: It is important because people built on the flood plain and it protects the town from flooding during 100 or 500 year flood events/ because it does not let natural flooding occur and develop of natural habitats.

07-01: The upper levee is important to protect the town of Orick from large floods. The lower levee is important because of its negative impact to threatened and endangered salmonid species (chinook and Coho salmon, and steelhead trout). It directly impairs the function and natural processes of the Redwood Creek estuary. The estuary habitat and existing condition limits production of juvenile salmonids that use the estuary for critical rearing during the summer and early fall. Recovery of threatened and endangered salmonids in Redwood Creek cannot be accomplished without addressing levee modifications and returning the natural function of the estuary. I believe the levees are important to the local ranching families that benefit from the levees protection during floods for their cattle ranching activities.

08-01: It protects the town from damaging floods. The problem is that the levee system extends to far downstream and has channelized the lower river and bisected the Redwood Creek estuary degrading the fish habitat. However if the levee were constructed today it would be engineered differently and hopefully the ecological effects to aquatic and riparian systems would be much less and some of the problems inherent in the present design (e.g. channel bottom designed below stream grade) would not exist. Downstream of Orick, the levees would be set back to allow for increased flood capacity and still maintain streamside riparian trees and vegetation and channel morphology (gravel bars, deeper pools, large woody debris, etc.) that would create better fish and wildlife habitat that now exists. The original project was designed from an engineering point of view without the input of biology and ecology influences.

09-01: Protects Orick from 100 year flood events.

10-01: It's supposed to help protect the community from flooding. It also seems to have a great deal of history tangled in it.

Question 2: Who maintains the levee system for Orick?

01-02: *Humboldt County* is supposed to but they don't do a very good of it. Over the years vegetation and sediment has overtaken inside the levee walls.

02-02: Public Works is responsible for maintaining the levy.

03-02: [intentionally left blank]

04-02: "The County" is supposed to but hasn't because of financial & environmental reasons.

05-02: Public works is supposed to but have failed to do so.

06-02: [intentionally left blank]

07-02: *Humboldt County* maintains the levee system. The County has not an adequate annual maintenance budget to keep up with the work. There are also conflicts between the requirements for annual levee maintenance by the Army Corps versus not being permitted by NOAA Fisheries to remove riparian trees rooted at the base of the levees that provides fish habitat.

08-02: *Humboldt County* is responsible for maintaining the levee system in Orick. It was a condition of having the project built on Redwood Creek as the local sponsor. The U.S. Army Corps of Engineers is responsible for inspections of the levee system and make recommendations and directives to the County on what needs to be done to maintain the system. None of the maintenance can occur without permit from the Corps. Also in the maintenance permitting process, is Section 7 consultation with NOAA fisheries because of the presence of federally listed salmonids and with the USFWS for species such as migratory birds and the endangered tidewater goby; a permit from the Coastal Commission because the flood control project falls within the coastal zone; a permit from the Regional Water Quality Control Board for water quality issues; and CDFW for a stream alteration permit. The National Park Service- Redwood National Park is responsible for maintaining the three box gated culverts that extend between the river(s) through the south levee into the south slough (the former last meander of Redwood Creek).

09-02: ?

10-02: I'm surprised to see the level of abandonment in Orick and for the levee system especially with Redwood National Park being here. You would think people would carry more pride for the United States. It's heartbreaking as an American to see how bad infrastructure has become and how folks just don't care anymore about anything but themselves. People come here from all over the world to see the trees. I watch them leave their trash, maybe use the bathroom and move on down the road without a clue as to how important this creek is.

Question 3: Are you happy with the maintenance of the Redwood Creek/ levee?

01-03: Too much politics and environmental regulations, they hinder the work to be done.

02-03: The levy has not been maintained to the standard required by the Army Corps of Engineers. Flood protection has been compromised.

03-03: Not proper maintenance as a levee system. Too much vegetation growth trapping gravel, raising the floor of the levee and reducing capacity of the levee to contain flood waters. No regular removal of gravel. Should be performed annually. Buildup happens each year with erosion materials filling the creek bed. Know there are permitting issues ... Bigger and bigger problem with illegal encampments. Buildup of garbage and debris that is left behind; tents, tarps, toys etc. goes into the creek and out to the ocean. Gets worse. Also pollution from human waste, etc.

04-03: The levee is in dire need of maintenance. Gravel removal in channel needs to be done regularly. Flood protection has been compromised due to lack of maintenance.

05-03: [intentionally left blank]

06-03: [intentionally left blank]

07-03: I feel this is a "moot point". The levees are not maintained at this time combined with the settling of a portion of the levees have cause it to be de-listed (perhaps that is not the right term) by the Army Corps. It will no longer be supported by the Army Corps of Engineers other than responding during a big flood. If it fails, the Army Corps will not pursue funds to fix the levee system. However, I would like to see the lower levees removed to return the natural function of the lower river/estuary system.

08-03: The maintenance activities are inherently damaging to the aquatic and wildlife resources in the Lower River and estuary. I can live with the levee maintenance to protect the physical town of Orick, but downstream of Orick where it is pasture and not houses, I believe maintenance should be less. Every year more gravel is removed and vegetation

cut, sooner or later the cumulative effects will be a 'bowling alley with sparse vegetation'. The problem is that the Corps 1968 O&M (Operations and Maintenance) Manual has not changed and the Corps idea of maintenance at the time was a smooth trapezoid channel devoid of all channel morphology (bars, pools, etc.) and vegetation. It is not 1968, it is 2016 and the O&M manual has not changed to reflect the thinking of today. The county is between a rock and a hard place. The county does not have the money for maintenance. They have to maintain the levee or will be legally liable if their deficient maintenance causes flooding damage to the surrounding landowners. They were given a project that has inherent design flaws that causes headaches for them.

09-03: Personally, yes, especially since they've allowed riparian vegetation to grow again to provide shade. Professionally, the western end of the levy has seriously impacted the functioning of the estuary- important rearing habitat for salmon, steelhead and other anadromous species.

10-03: There really is no maintenance being done for the creek or the levees. The estuary needs a whole reconfiguration and that is a lot of work that needs to happen. Congress would have to approve the project, so good luck with that.

Question 4: Has the levee system affected your life since you been here?

01-04: Being a home owner and living by the river, I feel protected and very thankful for it. Leave it alone.

02-04: Orick has not flooded in my lifetime.

03-04: I still have a home because of the dike. I am very cognizant of the loss of wetland habitat and its impact on birds and other species. I feel that dike needs to stay but be modified to be multipurpose. Wetland habitat at the mouth but still function as a dike further upstream. Long term planning for vast environmental changes that will effect the topography and water table. We have made mistakes all along the way and picking our fights is not the solution. Environmental degradation is a worldwide problem that needs core value changes for all of mankind. We usually get there the hard way. Now is NOT the time to disrespect the past and those who are immerse in that world. Instead honor history and its products. Work from there with consensus. Proper unbiased education on the issues is a very BIG component. Not side vs side but with mutual interest as a starting point. You won't find a person in this valley that does not love it. People and their systems are a part of nature needing recognition as much as other life forms. They are part of the equation and their exclusion with be the work of nature not man.

04-04: It protects the land I live on.

05-04: My family has been here through many floods the levee has saved own family farm many times

06-04: It creates a nice walking path along the creek.

07-04: It has affected my work since I have been involved in monitoring and restoration plans for the estuary and monitored gravel extraction for the Highway 101 Bypass. It is also one of the key components to restoring the estuary which I feel is necessary. I have also fished Redwood Creek recreationally upstream of the levees and know how the levees are a negative impact for the life history of these fish species. The channel between the levees are confined and have less complexity than the channel upstream where there is riparian trees and vegetation, connection to floodplains, large wood in the channel, etc. and the estuary has been over simplified and has suffered a tremendous loss in the amount of habitat and volume of water.

08-04: I have spent a considerable part of my career monitoring fish populations and water quality in the estuary- well over 30 summers, a witness to the effects of the Redwood Flood Control Project. To say that it is frustrating that implementation of any estuary restoration has not occurred is an understatement. Most natural resource professionals know what the biological solutions are, but it is the social and political solutions that need to be surmounted and agreed to.

09-04: [intentionally left blank]

10-04: US Hwy 101 and the Levee System are the two main pieces to this area and both are problematic, yet for different reasons, for the community here. They both have consequences and benefits to their presence in this valley.

Question 5: Would you say that most of your experiences with Redwood Creek in Orick are positive or negative? Why?

01-05: [intentionally left blank]

02-05: In my lifetime mostly positive, in recent years mostly negative. Homeless camps inside the Levy have polluted Redwood Creek with litter and human waste.

03-05: Of course! I love riding my horses on the dike and along the creek, through the water. It's wonderful. Beautiful views from the dike. Great trail.

04-05: It is the defining feature of the valley

05-05: I love having Redwood Creek run through the lower valley. It adds to the beauty of this area.

06-05: Because it provides habitat for animals and fish as well as other species. It also has a unique history.

07-05: Levee issues are complicated and finding common solutions is difficult. However, it is great that flow and sediment transport in Redwood Creek is monitored by the USGS and provide sound science for watershed issues.

08-05: I have had some positive wonderful times working in the estuary in good and bad weather; working with great people, learning about how the estuary works and its importance to salmonids, what lives there and when, seeing juvenile fish grow through the season; watching returning adult salmon swimming up through riffles in the lower river in fall; watching peregrines, osprey, bald eagles flying over head hunting; watching otters swimming in the estuary, snorkeling experiences in the estuary; watching the waves in winter propagate up the river (mother nature at work); working with data collected from the estuary monitoring and figuring out what is happening and why it is the way it is; interacting with some of the residents of Orick who are great to work with, etc. But also, negative experiences seeing the large woody debris in the channel that is essential for fish habitat being continually removed illegally by wood poachers; having park gates and locks along the levee vandalized, impeding our access to the lower river to do monitoring work, once coming to a gate site where some people had removed the entire gate; interacting with some of the residents of Orick who have very narrow views of the levee and estuary; the levee is an eye sore not very beautiful, etc.

09-05: I love the place.

10-05: The valley can transform into this wonderful place. The rodeo is a lot of fun.