

2003

The role of attachment in the social production of place in Pajaro Valley

Lori Burgman
San Jose State University

Follow this and additional works at: https://scholarworks.sjsu.edu/etd_theses

Recommended Citation

Burgman, Lori, "The role of attachment in the social production of place in Pajaro Valley" (2003). *Master's Theses*. 2434.
DOI: <https://doi.org/10.31979/etd.cfc9-5gw8>
https://scholarworks.sjsu.edu/etd_theses/2434

This Thesis is brought to you for free and open access by the Master's Theses and Graduate Research at SJSU ScholarWorks. It has been accepted for inclusion in Master's Theses by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

THE ROLE OF PLACE ATTACHMENT IN THE SOCIAL PRODUCTION
OF PLACE IN PAJARO VALLEY

A Thesis

Presented to

The Faculty of the Departments of Social Science and Anthropology

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Masters of Arts

by

Lori Burgman

August 2003

UMI Number: 1417470

Copyright 2003 by
Burgman, Lori

All rights reserved.

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI[®]

UMI Microform 1417470

Copyright 2004 by ProQuest Information and Learning Company.

All rights reserved. This microform edition is protected against
unauthorized copying under Title 17, United States Code.


ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

© 2003

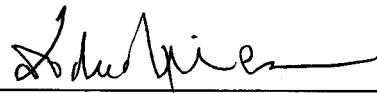
Lori Burgman

ALL RIGHTS RESERVED

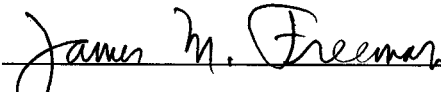
APPROVED FOR THE DEPARTMENT OF SOCIAL SCIENCE



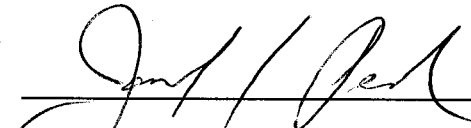
Dr. J. A. English-Lueck



Dr. Hien Do



Dr. James Freeman



APPROVED FOR THE UNIVERSITY

ABSTRACT

THE ROLE OF PLACE ATTACHMENT IN THE SOCIAL PRODUCTION OF SPACE IN PAJARO VALLEY

By Lori Burgman

This thesis addresses the topic of flood control in a rural, central California area. It examines the conflict between stakeholders regarding the implementation of a new flood control project. It explores the individual and group ideologies, political beliefs, and economic concerns that are based on stakeholders' place attachment, that is, the way they feel about their homes, community, and physical surroundings. The research demonstrates that stakeholder place attachment has resulted in socially contested ideals. Residents, members of special interest groups, and governing agencies have failed to reach a consensus regarding the technical, economic, social, and ideological factors that are involved in the social production of the new flood control project. The language of political discourse has given a voice to these conflicts in a public forum. To date, stakeholders continue the debate over proper flood control procedures.

ACKNOWLEDGEMENTS

I would like to thank the many individuals who have supported me in the research and writing of this thesis. Stakeholders from Pajaro and Watsonville have generously contributed their time and knowledge. Without them, this project would not have been possible. The members of my thesis committee, Drs. Hien Do and James Freeman, have provided continued guidance and encouragement. I would like to extend a special thank you to the chair of my thesis committee, Dr. Jan English-Lueck, who has been of invaluable assistance to me in this project, and has demonstrated endless patience. My friends and family have also been a source of encouragement and support. Finally, I would like to thank my husband, Chris, for his support, his encouragement and his love. This thesis is dedicated to him.

TABLE OF CONTENTS

CHAPTER ONE: Introduction	1
Map of the Lower Pajaro River Basin	3
Place Attachment	6
The Social Production and Social Construction of Space	14
Political Discourse	17
Conceptual Framework	20
Research Methodology	22
Data Analysis	26
Conclusion	27
 CHAPTER TWO: Pajaro People and Place Attachments	 29
Demographics and Socioeconomic Status	29
Stakeholder Economic Place Attachment	31
Attachment to the Environment	33
Genealogical Place Attachment	34
Place Attachment through Loss or Destruction	36
Property Damage	37
Health-Related Issues	39
Stress Caused By Flooding	40
Conclusion	43
 CHAPTER THREE: The Social Production of the Pajaro Flood	 44
Lack of Channel Maintenance and Dredging	44
The Endangered Species Act of 1973	45
The Social Construction of Space	48
The March '95 Flood	49
Induced Flooding	51
Rate of Flow	52
Benefit to Cost Ratio	53
Suspicious Cause of Flooding	55
Conclusion	57
 CHAPTER FOUR: Choosing an Alternative, the Social Production of Place	 58
Stakeholder Involvement in the Social Production of Space	58
The Creek Floodwall Alternative	59
Technical Concerns	60
Floodwall Construction Parameters	60

Concerns Over Floodwall Locations	62
Pumping Stations	64
Economic Factors	64
Perceived Benefits to Watsonville Residents	65
Floodwall Preferences	66
Flood Control Assessment Issues	67
Channel and Levee Maintenance	68
Ideological Factors	69
Environmental Concerns Regarding Floodwall Construction	69
Environmentally-Sound Channel Maintenance	71
Social Factors	72
Protection for the Town of Pajaro	72
Easement Issues	73
Aesthetic Issues	74
Conclusion	76
CHAPTER FIVE: Political Discourse, Community Action	78
Political Discourse	78
New Organizations Involved in Flood Control	79
The Stakeholder Process	81
Unacceptable Flood Control Measures	82
Proposed Design Criteria for Maximum Consensus	84
Procedures to Implement a Flood Control Project	87
Environmental Discourse	87
Preferred and Contested Land Use Models	90
2003 Issues	92
Conclusion	94
CHAPTER SIX: Place Attachment and the Social Production of Space	95
The Effect of Place Attachment on Stakeholder Consensus	97
Stakeholder Conflict and Place Attachment	97
Organizational Involvement and Identity	99
Organizational Effects on the Flood Control Project	100
Communication and Compromise	102
Implications for Mediation	103
REFERENCES	106

APPENDIX A	
List of Stakeholders	111
APPENDIX B	
Pajaro River Reaches	115
APPENDIX C	
Flood Control Alternatives	116
Table C1: Alternative Features Comparison	116
Table C2: Flood Protection Concepts for the Creeks:	
Concepts Evaluated for Hydraulic Proficiency	116
Table C3: Features of Alternatives	117
Table C4: Economic/Financial Feasibility Comparison	
Mainstream Alternatives	117
Table C5: Economic/Financial Feasibility Comparison	
All Tributary Alternatives	118
Table C6: Combinations with Best Potential:	
Preliminary Estimates	118

CHAPTER ONE

INTRODUCTION

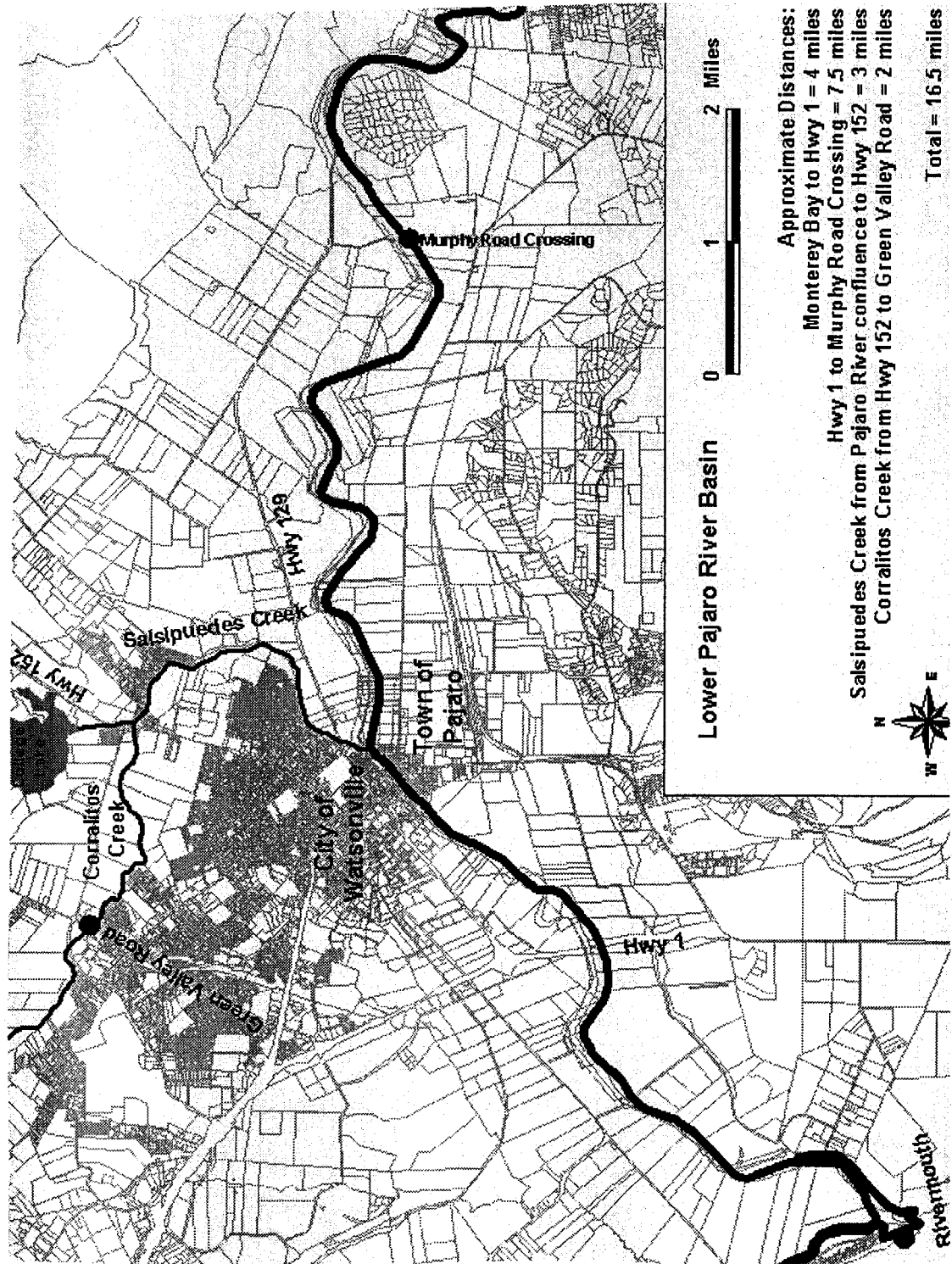
In this thesis I apply various social theories of place to the controversy surrounding flood control in a rural area of central California. It examines the conflict between local stakeholders as residents, members of special interest groups, and governing agencies fail to reach a consensus regarding the implementation of a new flood control project. This conflict will be examined by exploring stakeholders' attachment to the area, a process that involves looking at individual and group economic concerns, ideologies, political beliefs, and affective meaning bestowed on their homes, businesses, community, and surrounding physical environment. The research demonstrates that financial and environmental concerns, both concerns born of stakeholder attachment to place, are at the heart of the debate and have resulted in the lack of concurrence over proper procedures to control flooding in the area.

Flooding has been a persistent and devastating problem along the section of the Pajaro River that lies in the coastal area of central California. As the population and urban density increases, so does the problem of flooding. The levee system along the Pajaro River was constructed by the United States Army Corps of Engineers in 1949. Levees were built along the first twelve miles of the Pajaro River from its mouth to mile 11.8 on its north bank and to mile 10.6 on its south bank, and along 4.5 miles of the Pajaro River tributary, Salsipuedes Creek, from its confluence with the Pajaro River. The 1949 project was supposed to provide a 50-year level of flood protection along the Pajaro River, meaning

protection against a flood that has a one in fifty chance of occurring each year (MIG 2001: 7). However, recurring flooding prompted the Army Corps to study additional flood-control measures for the area. The severe flooding that occurred along this section of the Pajaro River in March of 1995 prompted the Corps to expedite a flood control project in the area (U.S. Army Corps of Engineers 1994:14).

In the spring of 1997, I was hired as a consultant by the Army Corps of Engineers' anthropologist, Dr. Richard Lerner, to conduct a social impact assessment study in the area. The purpose of the study was to provide local stakeholders' assessments of the probable effects the proposed flood control project would have on the area. Stakeholders included any individual or group of individuals that would be involved in, or affected by the implementation of a flood control project. During my interview with Dr. Lerner, I commented that I was surprised an anthropologist worked for the Army Corps. Dr. Lerner commented that the Army Corps wanted to project an image of "a kinder, gentler Corps." As part of this attempt to relate to the public, the Corps elicited stakeholder input on the implementation of a new project.

Prior to my employment, the Army Corps had been studying various flood control project alternatives. The creek floodwall plan was determined by the Corps to be the strongest candidate for meeting the Federal objective in water resources planning. The Army Corps asked me to present the plan to local stakeholders. The plan involved improvements to the Pajaro River tributaries, Corralitos and Salsipuedes Creeks (a map of the area is provided on the next page), through the construction of new levees or reinforcement of existing levees with floodwalls.



Map and Data Provided by Santa Cruz County, 2003

The Corps wanted to know if stakeholders would prefer levees or floodwalls, and how stakeholders believed the construction of the project would affect the aesthetics of the area (U.S. Army Corps of Engineers 1994:24). The results I compiled from the social impact assessment study revealed a consensus among all stakeholders that a flood-control project in the area was desperately needed. However, stakeholders questioned the level of protection offered by this plan alone. The creek floodwall plan involved improvements to Corralitos and Salsipuedes Creeks, but would not prevent flooding along the Pajaro River.

After addressing this complaint and reviewing the plan, the creek floodwall plan was rejected by the Army Corps of Engineers. Results from the study revealed other issues that plagued stakeholders and created conflict among stakeholders over appropriate criteria for an acceptable flood control project.

Research Problem

As of July 2003, this conflict still exists. The ongoing disagreement among stakeholders over acceptable flood control measures has made the implementation of a flood control project impossible. This debate results from a lack of concurrence among the stakeholders whose lives or personal beliefs will be affected by the implementation of the project. The number of stakeholders involved in this flood control project is large, and has grown since the social impact study was completed in 1997 (for a list of stakeholders see Appendix A). Governmental stakeholders at the state and federal level include representatives from the United States Congress, the California State Senate, the California State Assembly, and various regulatory agencies.

Stakeholders from local governing agencies include officials from Santa Cruz and Monterey Counties and representatives from the City of Watsonville and the Town of Pajaro (U.S. Army Corps of Engineers 1997b:12). Local stakeholders also include residents, business owners, farmers, members of various community interest groups, and members of local environmental groups. The stakeholders listed above, especially those who reside in the area, may belong to more than one category. These stakeholders are unable to reach a consensus regarding proper flood control measures due to several factors, including governmental, financial, environmental, and ideological.

Land use and environmental issues are paramount in this debate. Members of local environmental organizations are concerned over how much of the existing riparian habitat along the Pajaro River will be preserved with the construction of a new project. To ensure the continuation of a riparian habitat, environmentalists are requesting additional land be donated for the project, so that the Pajaro River may be widened. This land would have to be donated by stakeholders whose property borders the river.

Environmental law is also an issue that must be taken into consideration. Under the Endangered Species Act of 1973, biological studies must be conducted to determine the impact a flood control project will have on the local flora and fauna, including endangered or threatened species that may reside in the Pajaro River and its tributaries. Numerous governmental regulatory agencies are involved in this decision making process, and environmental law will ultimately impact the decisions of these agencies.

Financial concerns are also of extreme importance to stakeholders. Stakeholders who own property along the Pajaro River fear that they will suffer a severe fiscal impact if

additional land is taken to widen the river. Farmers would lose valuable farmland, and some stakeholders whose residences border the river would be forced to move. Another financial issue is how local stakeholders will pay for their share of the project. The Army Corps of Engineers has agreed to pay 75 percent of construction costs. Residents of the area will be responsible for paying the remaining 25 percent. Controversy exists among various stakeholders as to what percentage Santa Cruz and Monterey Counties should pay, and who will be responsible for payment. The fiscal impact upon residents and the means of payment has yet to be determined.

I will combine aspects of the theoretical perspectives of place attachment, the social production and social construction of space, and political discourse, to provide an analysis of the environmental and financial issues that plague stakeholders, issues that have resulted in the continuing stalemate over flood control management. Place attachment, that is, how stakeholders feel about, and are attached to, the area plays a crucial role in determining what type of flood control project is preferred.

Place Attachment

The theory of place attachment is multifaceted. Place attachment is studied by scholars from several disciplines, including environmental psychologists, social psychologists, folklorists, urban sociologists, and anthropologists (Hummon 1992:253). These scholars contribute a variety of “philosophical approaches, theoretical formulations, and research methodologies” to the study. Place attachment is also multifaceted in its scope of study. Place attachment investigates a variety of environments, from small-scale objects, to moderately sized environments such as

homes, to larger-scale communities and neighborhoods, and very large areas, encompassing cities and regions (Altman and Low 1992:xi). Reflecting on the diversity of place attachment studies, Shumaker and Hankin remark (Hummon 1992), “few fields of inquiry are so clearly interdisciplinary in nature” as the study of human feelings about places.

Place attachment involves the bonding of people to places. The word “attachment” emphasizes affect, the feelings bestowed on a particular place. The word “place” refers to the physical environment to which people have given meaning. Place may vary in size, location, may be tangible or symbolic, known and experienced or unknown and inexperienced (Altman and Low 1992:4-5; Hummon 1992:253). One of the hallmarks of place attachment appearing throughout the social science literature is that affect, emotion and feelings, are central to the concept. Hunter (1974) refers to place attachment as the emotional linkage of an individual to a particular environment. Altman and Low (1992) develop the concept further, stating that the emotional qualities of attachment to a particular environment are “accompanied by cognition (thought, knowledge, and belief) and practice (action and behavior).”

Addressing the issue of place attachment and identity, Childress proposes (Corcoran 2002) that human responses to places and the associations they carry in terms of memories and fantasies are the basis of attachment and are directly related to the development of self-identity. An essential part of human physiological nature produces attachments to environments that satisfy basic needs, such as places that offer protection and comfort. Such an environment may include one’s home, workplace, neighborhood, or

community. Riley states (Corcoran 2002) that these environments facilitate place attachment because they provide opportunities for personal displays that reflect personal identity, mastery and control, as well as providing privacy and security.

Much of the literature on place attachment supports the theory that attachments occur within a social context. Studies demonstrate that while there are often strong personal feelings that may pertain to specific people, these feelings are created in, and become part of, a social, or cultural environment. Place attachment is cultivated through relationships with family and friends, as well as community or culture. Attachment to place is thus construed through a repository of shared memories, traditions and identifications (Corcoran 2002:2,3) and is created from meanings and experiences associated with a particular environment (Altman and Low 1992:4,5,165; Manor and Mesch 1998:2). Thus, place attachment is more than an emotional and cognitive experience; place attachment includes cultural beliefs and practices that link people to place (Low 1992:165).

Identity with workplace, neighborhood, and community is an important factor to explore when addressing local stakeholders' stance on the issue of flood control. Identity is both expressed and fostered through participation in local special interest groups and organizations. Participation in these organizations, town, and stakeholder meetings allows for the expression of personal identity and cultural beliefs in the arena of the social exchange of ideals. Local stakeholders come from a wide variety of backgrounds. Ideals resulting in or based on attachment to place are just as varied and may fall into several different categories, as Setha Low explains below.

Through her studies, Low (1992) proposes a theoretical typology of place attachment that falls into various categories, including genealogical place attachment, economic linkage to place, and linkage to place through loss of land or destruction of community. Low states that these categories are general in definition, and the characteristics of one category often overlap with another. At times a particular place can be described in terms of all of the categories. However, the distinctiveness of each category serves to define the characteristics of place attachment in various cultural settings (Low 1992:166).

Genealogical place attachment refers to the linkage of people and land through the historical identification of place and family or community, and is maintained and strengthened by living in one location for a period of time (Low 1992:165). Long-term residence significantly increases sentimental attachment to a locale. Bonds are created over a long period of time through social interaction and the accumulation of shared history (Corcoran 2002:3; Hummon 1992:257). The area has become “imbued with personal and social meaning.” Those who have lived in the area for a long period of time, and who feel a strong, local sense of home and emotional attachment to their area experience a sense of “rootedness” (Hummon 1992:258).

Stakeholders in Pajaro involved in the decision-making process over flood control procedures have lived in the area all their lives, and fit the description of the “old-timer.” The bonds created over living in the area for decades, in many instances, have created a strong sentimental attachment to the area and have shaped individual beliefs regarding proper usage of the land and the type of flood control project that should be constructed

along this land. For many of these stakeholders, the attachment to this area is not only genealogical but economic as well, as many local stakeholders are also farmers and land owners.

Low (1992) describes economic place attachment as a “utilitarian relationship between people and land, such as the kind of attachment produced by ownership of or working in a particular place.” Ownership of land is the most powerful example of economic place attachment, as it links people to land through land tenure rules and political negotiations (Low 1992:170). Economic place attachment begins with the purchase or exchange of a place. The attachment is strengthened if this place is, or becomes, the means of the individuals’ or groups’ economic survival.

In my own study I saw that ownership of land creates an economic place attachment shared by old-timers and newer residents as well. Economic place attachment applies to the large number stakeholders who are landowners, farmers, and business owners. Economic place attachment, especially the ownership of land, plays a crucial role in determining stakeholders’ personal preferences for flood control measures. Place attachment through genealogy and/or economics offers an explanation of preferences for flood control measures for a large number of stakeholders involved in the decision making process. However, Low’s typology of place attachment through loss or destruction encompasses a broader spectrum of stakeholders, and applies to every stakeholder in some form or another.

Place attachment may be activated by the process of losing a place. Such loss results in reminiscing, and re-creating through memory a place that is now inaccessible,

uninhabited, or destroyed (Low 1992:169). Loss or destruction of place can occur in several ways, through “exile, resettlement, disaster or urban redevelopment.” Studies indicate that it is common for individuals who have lived in an area for a considerable amount of time and consider themselves to be old-timers to experience a loss of place, due to both perceived and tangible effects of gentrification, immigration, multiculturalism, and modernity (Allon 2002:101-105; Corcoran 2002:3). Studies of urban development demonstrate how urban regeneration and gentrification effect long-term residents, as newcomers challenge the shared history and collective memory associated with their sense of place (Corcoran 2002:58).

Allon’s 2002 study of the effects of large-scale, post-war immigration on an Australian suburb documents the efforts of one resident’s struggle with resettlement, gentrification and urban regeneration. The “old-time” resident observed the neighborhood’s character changing, as newcomers, mostly southern-European immigrants, began converting housing styles to reflect their own identity and culture. Traditional brick façades were covered with cement and painted in white or pastels. Leadlight windows were replaced with streamlined aluminum frames. He began collecting and cataloging the leadlight windows as they were discarded and stored them in his basement.

After a ten to 15-year span, the southern Europeans began to move out, and new residents, the affluent “yuppies” moved into the neighborhood. The new residents began to restore the houses back to their original condition. The man retrieved the archived leadlight windows from his basement and gave them to the newcomers. Allon’s study

supports Corcoran's (2002) statement that a sense of place rooted in the past may be "deployed as a resource to mobilize around the challenges of the present." Brown and Perkins (1992) propose that in the face of diversity, a sense of community and participation in community organizations actually strengthens individual identity and encourages individual well being (Brown and Perkins 1992:295).

According to Brown and Perkins, "place attachments are integral to self-definitions, including individual and communal aspects of identity." Disruptions in place attachment threaten self-identity. Brown and Perkins account of the Buffalo Creek flood in Arkansas depicts the loss of place, as well as the loss of individual and group identity, created by disaster. In this case, place attachment did not occur through loss or destruction. Instead, residents experienced what is referred to throughout the literature as a sense of placelessness, or place disattachment.

The 1972 flood devastated 16 small Appalachian mining communities. One hundred twenty-five people died, as the dam built by the local mining company failed. One thousand homes were destroyed, leaving 4,000 residents homeless. Residents' assumptions about the world were drastically altered, as homes that were once safe havens crumbled, dismembering some, trapping or killing others. The flood victims were mostly women and children, those who were supposed to be exempt from the casualties of a mining community. The belief that justice comes to the righteous left survivors reconciling their religious beliefs, as many flood victims were devoutly religious.

A class action suit was filed against the mining company, but most victims did not participate, opting instead for a small, but immediate, financial settlement. Once very

self-sufficient, residents became passive onlookers to the recovery process as outsiders brought in “bureaucratic sources of relief,” machinery and work crews to participate in the recovery. Residents first suffered from the drastic changes imposed on them due to the flood, then by outside authorities in charge of the relief effort. They found themselves to be caught up in “a protracted limbo” due to lengthy bureaucratic and legal delays. The state-employed psychologist assigned to the area reported observing a type of posttraumatic stress disorder that included “loss of appetite, sleeplessness, and extreme fear and anxiety when it rains.” This led to disabling personality changes and family problems. The psychologist contributed part of the disorder to residents’ lack of involvement in the recovery process, as they were non-participants in both the physical and social reconstruction of their community (Brown and Perkins 1992:291,292). The stories recounted above provide examples of individual’s efforts, or lack of, in the physical construction, or social production, of their environment.

Pajaro stakeholders interviewed for the social impact assessment study experienced stresses and behaviors similar to those who had posttraumatic stress disorder in Brown and Perkins’ study. Pajaro stakeholders, especially children, told me that they cry when it rains. Every stakeholder I interviewed had been affected by the long, drawn-out bureaucratic procedures involved in the implementation of a flood control project. Stakeholders express extreme frustration over the lengthy process.

Unlike the flood victims in Brown and Perkins’ study, stakeholders directly affected by flooding are not passive onlookers, but are fighting for flood control, and not just any type, but for the flood control measures they feel are appropriate for the area.

Local stakeholders have formed community organizations in order to inform the public about flood control issues and to express their opinions on the construction of a flood control project. Local stakeholders attend stakeholder meetings conducted by the Army Corps, and also gain knowledge of and voice their opinions on these measures.

Individual and group identities are expressed and strengthened through participation in community events as stakeholders participate in the creation, or social production, of their local space.

The Social Production and Social Construction of Space

In her article “Spatializing Culture: the Social Production and Social Construction of Public Space in Costa Rica,” Setha Low terms social production theory “the most promising new direction for anthropologists.” Social production theory focuses on understanding the built form within the larger context of society’s institutions and history. The social production of space is a process that combines the social, economic, ideological, and technological factors that influence the physical creation of a material setting. The built environment serves as a nonverbal medium for the morality, social standing within the community, and other important qualities of the self (Hummon 1992:259). As an object of study, the building becomes the representation of the “multiple forces of economy, society, and culture.” Low (1996) proposes that the analysis and interpretation of building decisions cannot be fully understood without examining the social and economic institutional forces that continually influence those involved in the decision process.

Low describes the social construction of space as “the actual transformation of space, through people’s social exchanges, memories, images, and daily use of the material setting, into scenes and actions that convey symbolic meaning.” She states that the terms social production and social construction of space are often used interchangeably, but it is important to distinguish between the two concepts (Low 1996:860,861). Richardson (1982) offers a distinction between the two terms: to categorize these domains in terms of their creative processes, historical, sociopolitical, economic, and professional understandings are matters of social production of space, while social use and affective meanings belong to the field of social construction of space (Richardson in Low 1992:165).

Gottdiener (1994) addresses the link between the social production and social construction of space, stating that space is a multidimensional concept, that is at once economic, political, and semiotic. It possesses the dual characteristics of being both a product of social relations and a producer of social relations (Gottdiener 1994:xv). Low states that both the production and construction of space may be contested for both ideological and economic reasons, and understanding these social processes reveals “how local conflicts over space can be used to uncover and illuminate larger issues” (Low 1996:861, 861).

Low provides an example of the social production and social construction of space, and local conflicts over space, through her studies of the Parque Central, located in the center of San Jose, Costa Rica. As Low demonstrates below, the plaza was socially produced, that is designed, constructed, and maintained, in different historical and

sociopolitical contexts, and “socially constructed through contested patterns of use and attributed meanings.”

Built in the mid-1700s, the Parque Central is one of the oldest plazas (Plaza Mayor) in the city. The spatial form and context of the Parque Central is a representation of Costa Rican Spanish colonial history. The Parque Central’s original design provided an enclosed space, with trees, paths, and benches. During the mid-1800s, the plaza was redesigned with “all the trappings of European bourgeois elegance” which included a large fountain imported from England, an elaborate iron fence, and a wooden, Victorian-style kiosk. Wealthy coffee growers and a Republican government composed of local land owners began to envision a class-biased conception of the plaza. Historical accounts of the time recount a plaza where the local elite would stroll in the evenings, and a plaza that was locked and patrolled at night. In 1944 the physical properties of the plaza were altered again, as a wealthy Nicaraguan industrialist donated a new, cement kiosk, and the wooden Victorian-style kiosk was replaced.

Over time, global political and economic forces continued to alter the daily life of the plaza. Most upper-class families left the inner city and relocated in more affluent areas, leaving the plaza to the working classes and the poor. These changes are reflected in varying occupations, worksites, social class, and gender composition of plaza users. Regular users of the plaza comprise an eclectic group, including male workers, pensioners, preachers and healers, prostitutes and spectators (Low 1996:865-869).

During the spring of 1992, a group of professional and middle-class citizens formed a campaign to demolish the cement kiosk and build a replica of the original

Victorian kiosk. The objective was to reconstruct the Parque Central in its “elite, turn-of-the-century image.” These citizens who proposed the change were not daily users of the plaza, but a group of citizens who longed for an idealized past. Low cites the campaign to demolish the cement kiosk as example of “a struggle over the social construction of the meaning and appropriate use of public space.”

The symbolic contrast of Victorian with modern, wood with cement, and elite with working class provide architectural metaphors for class-based taste, a forum for public conflict over appropriate modes of symbolic representation, and a convenient cover for broader class-based social meanings and conflicts.” The conflict was so controversial that it prompted a series of well-attended town meetings (Low 1996:869). These town meetings allowed conflicts to be expressed through the language of political discourse.

In a comparable manner, proposed land use models for a flood control project along the Pajaro River reflect the often class-based opinions of stakeholders representing differing social groups. For example, middle-class environmentalists, landowners and farm workers differed in their opinions about the relative importance of long-term biological impact or jobs. Attendance at local community organizations and stakeholder meetings facilitates political discourse and allows these opinions to be expressed in a public forum.

Political Discourse

Political discourse gives voice to specific issues arising out of a particular community. The community has both objective and subjective dimensions. The physical

setting is objective, defined by a particular geology and demography. Opinions regarding community issues are subjective, as they result from individual or group ideologies based on feelings about their community. Thus, the language of political discourse is a natural consequence of personal or group ideologies. Often political discourse will take place in a public forum. Like-minded individuals band together in a group to form a stronger voice and gain political clout. Subsequently, political discourse spoken in a public forum leads to conflict as differing opinions are expressed (Madsen 1992:440-442).

Community socioeconomic strata may be the basis for differing ideologies that define the subjective dimensions of that community. Wealthy people reside side by side with poor, individuals who consider themselves to be “old-timers” have a different vision for their community than those newer to the area. These subjective views of each group are expressed through local political discourse (Madsen 1992:444,445).

Richard Madsen (1992) provides an example of political discourse carried out in a southern California community, as two groups of citizens fought over land development issues. One group was comprised of those advocating for their “property rights,” and included property owners, businessmen, real estate agents, and local retailers. Most of these individuals had lived in the area for 30 years or more, and considered themselves to be “old-timers.” Property owned by these residents was zoned for dense housing, allowing for the construction of over 13 houses per acre. New zoning laws would allow the construction of only three houses per acre. Residents who had taken advantage of dense zoning ordinances and constructed duplexes or other buildings on their land had already made a large profit. Those who had not yet subdivided their property and built

housing were resentful and angered at the new county zoning ordinance, knowing they were going to suffer a financial loss.

Advocates for “slow growth” comprised the second group. The majority of these individuals had resided in the area since the early 1970s. The common goal of this group was to build a family home, in many cases a custom home in which they were involved with the design and construction, in a beautiful location with “magnificent vistas” of the surrounding mountains. These homebuilders came from various social backgrounds, from blue-collar workers and low-status white-collar workers, to professionals earning large incomes. This group realized that the only way to protect their efforts to “create decent homes” was to band together politically and form town councils composed of like-minded citizens who shared their common goal: to change the high density zoning ordinance (Madsen 1992:440-443).

Proponents of slow growth were accusing the property rights advocates of trying to turn the semi-rural area into a densely populated series of housing tracts. Members of this group believe that their community was not based on commercial and economic development of the area, but on commitments to building homes for their families with “like-minded neighbors.” Property rights advocates believed that too many regulations were being imposed by “new people and new ideas.” They claimed that the new restrictions on housing development not only affected them economically, but it threatened their way of achieving meaning in life through their commitments to a specific type of community.

Members of both groups believed that they were working for the good of the community. When addressing this issue, Madsen comments, “Whether cast about, as in this case, at the local level over concrete issues, like land development, or beamed across the airwaves in the rhetoric of the opposing candidates of our national political parties, American political discourse oscillates continually between the claim that one’s own side represents the public good and one’s opponent’s side the private interests of the selfish and greedy.” Americans arguing about political issues “couch their arguments in resonant moral terms and seem to sincerely convince themselves, if not their opponents, that they are standing up for principles that are noble and intrinsically good.” Members of the two groups speak a very different kind of moral language, a language based on differing subjective experiences within the community.

Differing social values and subjective experiences of local stakeholders have resulted in a political discourse much like the description above. Environmental and economic concerns collide as the language of members from each camp express their ideals at community meetings.

Conceptual Framework

When combined, discourse analysis applied to community rhetoric about place provides an analytic tool with which I will examine the conflict over proper flood control procedures for the Pajaro River and its tributaries, the Corralitos and Salsipuedes Creeks. Upon examination of the different typologies of place attachment, it is obvious that stakeholder opinions regarding the social production of this space will vary, often extremely. Stakeholders who have lived in the Watsonville and Pajaro area may feel

completely different about the area than stakeholders who live outside the area, whose interests are strictly economic and not necessarily nostalgic. Stakeholders whose main concerns are environmental, view the area primarily as a habitat that must be preserved. Others rely on the land for their livelihood. Clearly, stakeholder attachment to place results in the political, economic and personal ideologies involved in the social production of space, in this case the flood control project along the Pajaro River.

Political discourse gives a voice to these various ideological, economical, political and personal/affective beliefs of stakeholders involved in this flood control project. The language of political discourse is affective in itself. Issues that have meaning to a particular group are not necessarily important to another group. Differing opinions may lead to differing meanings attached to the language. Political discourse that is of importance to some may simply be political rhetoric to others.

Issues emerging from the political discourse of local stakeholders supporting flood control measures from an environmental stance are quite different from those expressed through the political discourse of local farmers, business owners and other residents. This thesis will explore these issues by discussing the sociopolitical ideologies and economic forces involved in the production and maintenance of the Pajaro River flood control channel, and the conflict over the production and maintenance of a new flood control project by applying analytical tools provided by the theoretical perspectives listed above.

Research Methodology

Information for this thesis was gathered in two phases. Phase one involved gathering information from the social impact assessment study I conducted for the Army Corps of Engineers in the spring of 1997. The second phase involved gathering information through archival research and by attending the stakeholder meetings held in Watsonville, California.

The names of selected stakeholders for the social impact assessment study were provided by the Army Corps of Engineer's San Francisco Branch. I gathered background material on the March 1995 flooding in the Watsonville and Pajaro area as well as names of additional informants from The Watsonville Register-Pajaronian newspaper. Contacts were also provided by representatives of local governmental agencies, interest groups, and by individual informants. Through the process of snowball sampling, I gained information and additional contacts from preliminary contacts (Bernard 1994:97). I also targeted sampling of representatives from interest groups, local businesses, residents, and individuals who own land and/or farm in the Watsonville for interviews. Ultimately, I interviewed close to ninety individuals.

It was essential that I interview stakeholders from three specific locations. These locations included properties that would be impacted by the physical construction of a flood control project. The first two locations were residential areas that border the Salsipuedes Creek where construction of the 1,000-foot section of floodwall along both sides of the levee was being considered, and residences whose backyards border the Corralitos Creek, where the 1,400-foot section of floodwall was considered for construction. The third area

consisted of farmland located along Corralitos Creek. Through convenience sampling, I interviewed a number of individuals from these areas.

Due to the devastation the 1995 flood had caused the Town of Pajaro, and because of the expertise on flood control issues offered by individuals from this area, I selected business owners, farmers, and residents from the town to be interviewed. Again, names of additional individuals and business owners were provided through snowball sampling. I was also interested in interviewing other groups or individuals who might be affected by a flood control project. These included Watsonville businesspersons, local farm laborers, and individuals who walked or jogged along the paved path of the levee. Data from the informants listed above was gathered through both site visits and telephone interviews.

To obtain stakeholders' opinions regarding the creek floodwall plan, and to glean additional information on other topics of concern, I conducted open-ended interviews, mostly in person, a few by telephone, eliciting the facts, causes, and consequences of flooding as each person understood it. Out of this data, I began to see patterns that allowed me to refine my interview protocol. The information enabled me to construct a list of specific questions and conduct follow-up, structured interviews with several key informants targeting key differences in experience and worldview. Upon completion of the interviewing process, I compiled and coded the information for themes based on general consensus, and recorded the data in sections of the social impact assessment report. Views expressed by one or two individuals were also listed and indicated as such. Quotations were culled that later provided the material for detailed discourse analysis.

I conducted a total of eight site visits in the Santa Cruz, Watsonville and Pajaro areas. Meetings with members of the Santa Cruz County Public Works and Planning Departments were held at the county offices in Santa Cruz. A meeting with members of the Sierra Club, Santa Cruz Chapter, took place in Santa Cruz. An additional group visit included a meeting with the staff of Driscoll Strawberries.

On my first site visit, a tour of the Salsipuedes Creek levee and floodplain sections of Watsonville was provided by the director of the City of Watsonville Public Works Department. A tour of farmland along Corralitos Creek was conducted by the owner. A map of farmland parcels and names of additional farmers and/or property owners were provided by farmers during my visits to two farm headquarters. I contacted these landowners and farmers by phone.

During one site visit I spent part of the day walking along the Salsipuedes Creek levee, so that I could interview residents who walk, jog, or ride bikes along the levee. The rest of the day was spent walking around neighborhoods where residents' backyards border Corralitos Creek. Individuals walking along the levee were selected by convenience sampling for interviewing, as were residents with property along Corralitos Creek. Residents provided names and phone numbers of their neighbors who were away that day, so that they would be able to give their input. I contacted them by phone at a later date.

I visited the town of Pajaro on two separate occasions. On my first trip to Pajaro I was able to conduct interviews with business owners whose names had been provided by previous interviewees. Residents I interviewed in Pajaro were selected by convenience sampling. I spent another full day and interviewing field workers. I first selected

individuals from a group working in a field. Unable to quit working to talk, they provided names and locations of additional contacts that they believed would be willing to answer questions. They directed me to a nearby migrant camp, where I met several individuals willing to be interviewed.

Santa Cruz County governmental agencies that I contacted for the social impact assessment study included the Santa Cruz County Public Works and Planning Departments, the Santa Cruz County Agricultural Commission, the Pajaro Valley Zone 7 Flood Control District of Santa Cruz County, and the Santa Cruz County Farm Bureau. I also interviewed individuals from the City of Watsonville Public Works and Community Development Departments, the Community Development Department, and the Housing and Economic Development Department.

Participants from Monterey County governmental agencies I contacted for participation in the study included individuals from the Monterey County Public Works department, the Monterey County Planning and Building Department, the Monterey County Agricultural Commissioner's Office, the Monterey County Department of Environmental Health, the Monterey County Water Resources Agency, and the Monterey County Redevelopment Agency.

I invited members of organized interest groups listed below to provide comments to be included in the social impact assessment document, and to share their expertise of the study area. Organizations included Together in Pajaro (Pajaro Juntos), a voluntary non-governmental association comprised of local citizens who organized after the March, 1995 flood to assist community members with flood control issues, and the Technical Advisory

Committee for the Pajaro River Restoration and Management Plan, a committee formed of government officials and residents concerned with the restoration and management of the Pajaro River.

I also contacted and interviewed members of the Association of Monterey Bay Area Governments (AMBAG), an agency involved in water resources planning for the Pajaro Basin, and the Natural Resources Conservation Committee (NRCS). The NRCS oversees the Coordinated Resource Management Plan (CRMP) steering committee, a group whose membership is comprised of individuals from governmental agencies as well as concerned citizens interested in developing a water management plan.

Environmental groups I consulted for the social impact assessment study included the Santa Cruz Chapter of the Santa Cruz and Monterey Counties Sierra Club, and the Watsonville Wetlands Watch, a grass-roots environmental organization concerned primarily with wetland issues, but also involved in dredging issues along the Pajaro River. Both environmental groups expressed an interest in working with the Army Corps of Engineers and other governmental agencies on a flood control project.

Anonymity and confidentiality were necessary conditions of this Army Corps of Engineers project. To assure their anonymity, individuals will be identified according to their status in the report: as stakeholders, residents, property owners, or farmers.

Pseudonyms will be used when citing quotations or stories.

Data Analysis

To complete the first phase of this study, interviews for the social impact assessment study were compiled and coded for themes based on general consensus as well as personal

opinions. Themes emerging from newspaper articles, documents provided by the U.S. Army Corps of Engineers, the Counties of Monterey and Santa Cruz, and Congressman Sam Farr's office were coded and matched to themes that emerged from personal interviews. These themes included opinions on why the March 1995 flood occurred, and opinions on preferred flood control measures for a new project.

For the second phase of this study I collected archival information, including newspaper articles and information provided by key informants, and observations and accounts from stakeholder meetings. Again, these materials were analyzed according to stakeholder perspective, and political discourse regarding possible outcomes. Themes emerging from the second phase of the study were coded and matched to data included in the social impact assessment study. Data gathered from both phases of this study will be analyzed through the application of the theoretical perspectives listed above.

Conclusion

Material gathered through the research methods described above, and the subsequent analysis of this material will be presented in this thesis. Much of the first four chapters set up the events that surrounded the 1995 flooding and the consideration of the earliest set of alternatives proposed by the Army Corps of Engineers. The research problem, theoretical framework and methods used in the analysis of the problem were discussed above in chapter one. Chapter two will consist of a description of the Watsonville and Pajaro areas, along with events that occurred during the flood of March 11, 1995, and the effects of the flood on the area. In chapter three, I discuss the various causal understandings that different stakeholders hold regarding events that

contributed to Pajaro River flooding. Chapter four focuses on the dissention surrounding the creek floodwall plan, along with opinions of participants in the social impact assessment study regarding the plan, and preferred flood control measures. Chapter five updates the controversy by examining data from the more recent, archival and observational phase of this study. Chapter five will describe current action and attempts at consensus in regards to a flood control project. Political discourse over various alternatives will be examined a means of expressing cultural values based on place attachment, and how social values affect regulations regarding the current production of space, the new flood control project. Finally, in chapter six, I will examine the political and social processes of flood control decision-making in the Pajaro region, and discuss the implications for applying this type of analysis, based on the social production of place, to applied research in the social sciences.

CHAPTER TWO

PAJARO PEOPLE AND PLACE ATTACHMENTS

In this chapter, I will describe stakeholder attachment to the Pajaro River and its surrounding communities and use the different processes of place attachment to illuminate the various attitudes held. In this chapter I will explore the physical, environmental, and social factors involved in the development and reinforcement of these typologies of place attachment. First, the demographics and socioeconomic status of stakeholders who live in this area will be outlined. Demographics and socioeconomic status are integrally linked to the types of place attachment formed by local stakeholders. Next, a description of physical, environmental, and additional social factors will be presented; factors that have played a dominant role in determining the typologies of place attachment experienced by all stakeholders involved in this study. These factors are largely influenced by the experiences of local stakeholders during and immediately following the March 1995 flood, and by stakeholder feelings about the riparian habitat located along the coastal section of the Pajaro River.

Demographics and Socioeconomic Status

This section of the Pajaro River separates the Counties of Santa Cruz and Monterey. The City of Watsonville, Santa Cruz County, is located to the north of the Pajaro River. Businesses and residences as well as agricultural land are located within the study area. Watsonville is a small, rural farming community, with a population of approximately 45 thousand (United States Census Bureau 1990). Demographics indicate a population of

Hispanic, Anglo, Japanese, African American, and Pacific Islander. Businesses include manufacturing plants, restaurants, gas stations, auto shops, a variety of markets, and City Hall. Residential areas are comprised of apartments, single-family dwellings, and the retirement communities of Pajaro Village and Bay Village.

The socioeconomic status of Watsonville residents is also varied. The median income for residents listed in the 2000 census report was \$40,000 a year (United States Census Bureau 1990). Evidence of wealth is demonstrated through the presence of a scattering of million-dollar country homes and farmland. Run down houses and apartments in other areas belie the fact that many residents live below the poverty level.

The Town of Pajaro, Monterey County, is located to the south. The Pajaro River is the actual physical divider between Watsonville and Pajaro. The Town of Pajaro is very small in size and population. Approximately 3,300 residents live in Pajaro (California Department of Finance 1997). The town has only one main street. Businesses along the main street include gas stations, stores, restaurants, a panaderia (Mexican bakery,) and a tire shop. The locale this side of the river is very rural, and consists mainly of surrounding farmland. Approximately 90 percent of the population of the Town of Pajaro is of Hispanic origin. Residents of the town suffer from higher levels of poverty and unemployment. Many Pajaro residents live below the poverty level. Since this is a farming community, many residents are farm laborers. Two migrant housing camps are located just outside of town (U.S. Army Corps of Engineers 1997b:2,33).

Reasonably, the demographic and socioeconomic variation in stakeholders residing in the Pajaro region is also reflected in differing cultural attachments to place. However,

there is a common discourse that can be found across the board, although the specifics will differ. Economic place attachment, thinking about a place as an economic asset, whether on a large or small scale, is salient to all the people interviewed and observed.

Stakeholder Economic Place Attachment

Economic place attachment reflects the variety of economic relationships people have with place, including ownership or investment in a home, business, a large-scale farming operation, or governmental expenditures. Local business owners' think about space as an economic asset, place is intimately associated with their means of support.

Homeowners share an economic interest in the ownership of their property as well. Both may have a deep affective attachment as place, identity, and security become culturally intertwined. Economic place attachment is paramount for local farmers. Farming is an immense industry in the Pajaro Valley, as the mild climate is conducive to growing a wide variety of crops, including apples, strawberries, raspberries, and row crops consisting of varieties of lettuce and cauliflower. At the time of the social impact assessment study, the estimated worth of farmland in the Pajaro Valley ranged from \$20,000 to \$25,000 per acre.

Today the cost has doubled. The most valuable land, valued at \$50,000 an acre, is located in the Pajaro area; land in this region is heavier and flat. Leases in this area run from \$2,000 to \$2,500 an acre per year. The cost to farmers to plant crops in this area ranges from \$15,000 to \$30,000 per acre (U.S. Army Corps of Engineers 1997b:3-4). Such figures explain the high level of economic place attachment that farmers experience as well as the motivation for having a voice in the type of flood control project to be implemented.

Farmers are being asked to give up a certain amount of land for the new flood control project. How much land they will have to give up has not been determined. They do not want to give up more land for a flood control project than they must. This land is their livelihood, and they are tired of the attitude expressed by stakeholders who devalue the land. One farmer told an amusing story that depicts how some view the value of farmland. He was working in his strawberry field one day, when he spotted a man standing at the edge of his field eating strawberries. The man had been walking along the adjacent levee and had stopped to pick berries. He told the man that this was his farm and he was eating up his profit. He explained to the man that if everyone who walked along the levee stopped to help themselves to strawberries, there would be nothing left. "But these grow from the ground," the man replied, denoting his belief that what grows from nature should be free. The farmer's response was to ask the man what line of business he was in. "I make furniture," the man replied. "Well then why don't you give me a chair?" asked the farmer, implying that the man should give him the chair free of charge; that the principle is the same.

Farm owners clearly have a very large economic stake in the area, and economic place attachment drives their opinions on proper flood control measures. Local city and county agencies have a financial stake in the area as well. Local dollars must be raised to assist with the construction of a new flood control project, and to maintenance levees or floodwalls along the river. Economics is the primary concern of federal and state governing agencies that are involved in the flood control planning process as well. The Army Corps of Engineers has a high financial stake in the area, as the Corps is responsible for paying 75 percent of construction costs, a sum that will run into millions of dollars. Although

members of federal and state agencies are certainly sympathetic to the plight of the flood victims, their involvement stems from fiscal planning and disbursement of funds. They do not have a personal stake in the decision-making process. Whatever flood control project is constructed, their personal beliefs and ideologies will not be determining factors in the decision, nor reflections of personal ideologies. Even an environmentally friendly bureaucrat must abide by the regulations and decisions of the organization. The opposite holds true for local stakeholders whose opinions on proper flood control procedures are based on immediately experienced environmental concerns.

Attachment to the Environment

Environmentalists involved in the planning process for a new flood control project are passionate about the subject, and are dedicated to a cause: to ensure the existence of a riparian habitat along the Pajaro River and its tributaries. Environmental studies conducted by the Army Corps of Engineers for the new flood control project have revealed that sections of the Pajaro River and Salsipuedes and Corralitos Creeks provide a rich riparian habitat for a variety of species of flora and fauna.

Growing along the Pajaro River and Salsipuedes Creek are a variety of native and non-native weeds and grasses. Plant species include California sagebrush, cattail, tule, German ivy, poison oak, and wild berries. Trees most commonly found in the area are Willow and Cottonwood, with a few Sycamore and Alder. Animal species common to the area include the Great Blue Heron, the Snowy Egret, Western Meadow Lark, the common garter snake, gophers, and ground squirrels. Steelhead trout and the Santa Cruz long-toed salamander also live in the river (U.S. Army Corps of Engineers 1994:3).

The evidence from the Corps' report has armed local environmentalists with ammunition to fight for the preservation of a riparian habitat along the Pajaro River. They are determined to provide a habitat for the salamander because it is on the list of endangered species. These environmentalists' emotional linkage, or place attachment, to the Pajaro River and its tributaries is based on personal beliefs and ideologies that have been created from meanings and experiences associated with this environment.

These experiences have occurred within a social context, and are thus culturally construed beliefs that link people to place. For this group of stakeholders, individual identity and attachment to place is strengthened through association with local environmental groups, including the Santa Cruz Chapter of the Sierra Club, and the Watsonville Wetlands Watch. Bonds are formed as they fight for the flood control project they deem necessary to ensure the existence of the riparian habitat.

Several stakeholders involved in the environmental movement are long-time residents of the area, and are also attached to place through genealogy. Many farmers own land that has been passed down through generations, thus are also attached to place through genealogy.

Genealogical Place Attachment

Attachment to place through genealogical links applies to many local stakeholders. Some business owners, whose primary attachments may be economic, are long-term residents of the area as well. These stakeholders are linked to the area through the historical identification of place, family, and community, and experience a place attachment that has strengthened through time. They definitely consider themselves to be

old-timers. Long-term residents fall into both categories, and are affected by urbanization and gentrification as these “newcomers” challenge their common history and collective memory associated with their sense of place. Some have very strong opinions regarding proper flood control methods, as demonstrated by the story below.

One very elderly farmer stood up at the end of a stakeholder meeting to speak her mind. She was angry, and clearly fed up with governmental intervention and the continuing disagreement among stakeholders. She addressed her comments to the staff of the Army Corps of Engineers. She stated she had been farming in the area for sixty-one years. “Farmers are the best environmentalists there are,” she said. “We know how to take care of the land.” She continued to say that the Army Corps treats farmers like they have “no brains at all;” that farmers used to take care of their own land themselves, and dealt with any flooding that occurred. She expressed her anger over local population growth. “Too many people came to the area, and now the Army Corps of Engineers wants to put up walls!” She continued, stating that, “Farmers are losing out the most.” After she got through speaking, the room was silent. Nobody was about to dispute what she had to say, or show disrespect to this old-time farmer.

This old timer’s attachment to the area reflects two of Low’s kinds of place attachment: attachment to place through genealogy and attachment to place through loss or destruction due to urbanization. She views newcomers and the Army Corps of Engineers as challenging her sense of place. Other long-time residents are not as impassioned or outspoken, but still very concerned with, and involved in the planning of the new flood control project. The residents of the retirement community Bay Village

have formed a group that meets at their clubhouse once a month to discuss flood control issues and progress status. The residents I interviewed from Bay Village were tired of lengthy delays and fighting over the riparian habitat. They just want to see construction of a project begin. Genealogical place attachment certainly applies to other local stakeholders as well, even to some environmentalists. Environmentalists who experience genealogical attachment to the area may long for a time when the area was undisturbed by man and concrete, just like the elderly farmer who spoke out at the stakeholder meeting.

Although members of these environmental groups are fighting to ensure a riparian habitat along the Pajaro River, all environmentalists interviewed for this study believed that human life comes first, and that the priority for the implementation of a new flood control project is to protect the area from future flooding and prevent the devastating effects that occurred during the March 1995 flood.

Place Attachment through Loss or Destruction

One of the striking features of the people interviewed and observed in this project is the evolution of place attachment in Pajaro after the 1995 flood. Low has noted that attachment to place can be altered, amplified or truncated, through loss and destruction. The events that ensued during the 1995 flood, including the severity of financial and emotional consequences suffered by local stakeholders, link every stakeholder to Pajaro in an emotional bond.

Property Damage

The loss experienced in the flood was multifaceted. Some losses were economic, and those losses played a role in the later bureaucratic assessment of the event. Other losses were more affective. Losses were also not experienced in the same degree in the entire region. Overall, Watsonville stakeholders, located near Pajaro in a much larger town, reported that flood damages to their homes and businesses averaged around a few thousand dollars. Watsonville businesspersons reported that property damage to many structures from recent flooding was not very severe; some businesses received no damage. They believe flooding in their area resulted from drain water backing up due to failing pumps and from overflowing sewers. One business owner stated that the greatest damage to his business resulted when an out-of-control car, due to brake failure, smashed into his building. "Other than that," he stated, "a few tiles needed to be replaced, some inventory was lost. Damages in downtown Watsonville were minor compared to Pajaro."

Stories recounted from Pajaro businesspersons and residents were very different. Damages to Pajaro homes and businesses ranged from several thousand to several million dollars. A Pajaro strawberry farmer suffered several millions of dollars worth of crop damage. Damage that occurred to agricultural land in the Pajaro area was estimated at \$70 million. Estimated damage to the entire Pajaro Valley was \$100 million (U.S. Army Corps of Engineers 1997b:27).

The manager of Driscoll Strawberries research lab, located just outside the Town of Pajaro, reported that 80 percent of his research farm was destroyed, and approximately 250 acres of commercial production was "wiped out" from the flood. One local farmer reported

losing six wells in addition to 300 acres of crop damage. Farmers stated that the local strawberry industry had been plagued by a cyclospora outbreak in 1994, then shortly after, testing revealed that hepatitis A was present in strawberries imported from Mexico. Then came the March 1995 flood. Taking all these factors into consideration, a local strawberry farmer commented, "The market is a disaster."

Local stakeholders hit extremely hard by the flood were small business owners and residents of Pajaro. Peggy, a business owner, commented, "We are still trying to survive and stay in business." Her business suffered close to \$600,000 in damages. Peggy stated that nobody called to warn her of the impending flood. She said Smucker's had just made a major purchase of blue storage barrels for their jam. During the flood the barrels were swept away and came crashing through the window of her business. The contents of her business were lost, including shop inventory, computers, client files and furniture.

Other stories of devastation were recounted from Pajaro stakeholders. Joyce, another Pajaro businesswoman, recalled how she and her family lost all they owned. All belongings in both their home and her business were destroyed. Joyce estimated that damages to her home and business totaled approximately \$50,000. Unable to afford the cost of repairing or replacing the floors, walls, and equipment of her small business, she was forced to close the business for six months.

Joyce was allotted a total of \$1,000 in aid from the Federal Emergency Management Agency (FEMA) to help make the necessary repairs. Local residents and friends donated items and helped her with the clean up and repairs. Her husband lost his job, since his place of employment was also destroyed in the flood, so more financial

pressure was placed on her. Back in business, Joyce told me that she was “just barely hanging on” to the business. Regarding our next interview, she remarked, “I don't know if I'll be here when you come back,” she said. She looked down and shook her head.

In 1997, two years after the flood, Pajaro business owners were still tallying up the losses concurred during the 1995 flood. Alexis, a Pajaro farm owner, commented that she still had tax write-offs. She continued to discover damaged inventory. Bruce, also a Pajaro farmer, discovered he would have to replace yet another flood-damaged well. Time to report damages to FEMA was limited; and his time was up. He would have to spend \$150,000 out of his own pocket to replace the well.

Health-Related Issues

Floodwater from the 1995 flood was highly contaminated with sewage. The water was tested for fecal coliform bacteria. Found in raw sewage, the bacteria causes gastrointestinal diseases. The bacteria may also cause polio and hepatitis. Floodwater was not tested for other bacteria. If fecal coliform is present, it is assumed other bacteria are present as well. The floodwater tested well above the standard 200 Most Probable Number (MPN) per 100 ML of water for fecal coliform bacteria (U.S. Army Corps of Engineers 1997b:30).

Sewage ponds upstream broke, sending untreated sewage downstream. Also, sewage lines broke and septic tanks overflowed. Although floodwater ran through a local pesticide company, testing of water revealed no traces of chemicals. Contaminated well water was unsuitable for drinking. Bottled water was brought to the area, and eventually replaced by water stations. Well water was unsuitable for drinking for six months.

Chemical toilets were stationed in the area for a month as sewer lines were being repaired.

As waters ceded, cleanup began. Contaminated mud had to be cleaned from businesses and homes. All “non-hard” items such as bedding, clothes, and furniture were disposed of. Salvaged items had to be scrubbed with chlorine bleach, as did all solid surfaces. Several residents developed rashes due to contamination exposure. A mobile van from the Santa Barbara Public Health department was dispatched to Pajaro. Residents were advised to get tetanus shots (U.S. Army Corps of Engineers 1997b:30-31).

Stress Caused By Flooding

As we sat and talked, Joyce recalled the night of the flood. Fearing that flooding was imminent, she sent her children and grandchild to stay with her mother, who lived out of town. She and her husband remained behind to pack a few personal belongings, a VCR, and some clothes and heavy blankets into her car. Believing that water would rise and overflow the banks of the Pajaro River she drove away from the location of the river. Instead, as she drove down the street, she saw water rushing from the side of town opposite the river, directly toward her. Trapped in her car, she waited as the water swirled around her knees, then rose to her chest. Joyce crawled out the window to the top of her car and began to scream for help.

She waited and watched helplessly, as the fire department rescued children first. After about fifteen minutes, she was rescued from the top of her car and taken to her mother's house, where she stayed for four days until she was allowed to return to her home. Joyce lost her home and had to close her business until repairs were completed. The financial and emotional strain took a toll on her family and her marriage. Her husband recently asked her for a divorce.

Peggy talked about the problems encountered after the flood of 1995 and the quality of life in Pajaro since the flood. Smiling, she clenched her fists in the shape of claws, explaining that this is the state of peoples' nerves. People are "just hanging on" to their sanity as well as their livelihood. "Families are being destroyed by the stress. The area suffers from twenty to twenty-five percent unemployment. Husbands feel inadequate. People cry when it rains. Everyone in the area suffers from psychological problems."

Business owners in the Pajaro area became concerned with locating inventory in a high location. Alexis was afraid of flooding was about to occur three times during 1997. Each time, she drove to her farm headquarters late at night, to stack belongings onto desks. She remarked, "This is a lousy way to live."

Peggy commented on the high levels of stress experienced by Pajaro residents. She stated that children in the area become extremely agitated by flooding and stories of flooding, and they often cry. One boy watches the weather report every night. When it rains, he believes he and his family should be evacuated. Officials at the elementary school, concerned that children may be stranded at school during a flood, contacted the group Together In Pajaro for advice. The officials were told to have each child carry a plastic bag filled with emergency supplies to school for use during a flood.

Residents who did not directly experience the flooding were inundated by stories from the media, causing them anxiety. Some adults cry when the weather forecast predicts rain. Peggy talked about the owner of a Pajaro business, a kind gentleman who was always willing to help anyone in need and who performed community service in the Town of Pajaro. She stated he had been battling cancer for years, and after the flood he was so

overwhelmed and distraught that he gave in to his cancer and died. She also believes that the flooding indirectly caused another death; that an overwhelmed resident committed suicide (U.S. Army Corps of Engineers 1997b:28-31).

The events recounted by Peggy, Joyce, and Alexis demonstrate that the residents of Pajaro experienced physical and emotional trauma similar to the symptoms of post-traumatic stress disorder recounted in Brown and Perkin's study of the Buffalo Creek flood. Members from both groups experienced depression, extreme anxiety when it rains, disabling personality disorders, and family problems. Additionally, Pajaro residents have been additionally aggravated by changes imposed on them—first from the flooding and then from the lengthy bureaucratic delays in restoring their businesses, homes, and community.

However, there is one significant difference between the two groups. Brown and Perkin's study revealed that part of the Buffalo Creek residents' psychological problems stemmed from the lack of participation in the social and physical construction of their new environment. They experienced place detachment and a loss of identity. The opposite is true for many Pajaro residents, like Peggy and Alexis. They have become intense activists for the recovery of their community, often spending several evenings a week in meetings or related activities. They experience a strong sense of place attachment to their environment due to the loss and destruction that occurred in Pajaro due to the 1995 flood.

Their identities have been reified by the events that have unfolded since the flood. They formed the new community organization, Together In Pajaro (Pajaro Juntos), to provide public education on flood control issues and encourage public participation in the community. Various community members have joined the Technical Advisory Committee

for the Pajaro River Restoration and Management Plan. Several residents attend stakeholder meetings. Peggy and Alexis serve on a working group, a group comprised of individuals that work together with governmental agencies toward implementing the flood control project.

Conclusion

In this chapter we have looked at stakeholder personal identity and how identity has resulted in attachment to place. Different stakeholders fell into one or more of Low's typologies of place attachment, depending on several factors, including economic and environmental concerns, as well as attachment to place, based on the length of time one resided in the area. Economic attachment to place encompasses the majority of stakeholders, and is second only to attachment through loss or destruction. Attachment to place through loss or destruction is the one common link between every stakeholder involved in this project. In the next chapter we examine the models of causation held by the different stakeholders surrounding the events that led to the severe flooding of March 1995, including the effect they believe the Endangered Species Act had on the area. Different kinds of place attachment are intimately connected to people's perceptions. The Pajaro River levee system, through its use by different people, has become a social production in which people enact their understandings of place. Use, the development of physical properties over the years, and environmental law influence how people interpret the events of the 1995 flood.

CHAPTER THREE

THE SOCIAL PRODUCTION OF THE PAJARO FLOOD

One of the tasks of social theory, especially in cognitive anthropology, is to ascertain why people think certain events occur. The historical event of the 1995 flood is not simply a geographically isolated self-explanatory episode. The multi-causal nature of the flood leaves it open to interpretation. To what degree is the flood a consequence of human action? If it is a consequence of something people did, then who should be held accountable? Finally, if people are to “blame” for the flood, how does this responsibility play out in future decisions about preventing or mitigating future flood damage? People in Pajaro believed that a combination of events contributed to flooding along the Pajaro River. How the different stakeholder groups relate to the region—their place attachment—shape how they interpret the events that contributed to the March 1995 flood. Stakeholders whose attachments were largely economic were most likely to view environmental law as a contributory factor. Stakeholders who emphasize environmentalism believe that the clearing of the river channel after the flood was disastrous, and created the most serious consequences.

Lack of Channel Maintenance and Dredging

The lack of channel maintenance and dredging was the topic most often discussed by stakeholders involved in the social impact assessment study. However, stakeholder opinions on the topic varied according to stakeholder typology of place attachment. Ironically, both groups of stakeholders listed below experience attachment to place due to

loss and destruction, yet the factors leading to this attachment are opposites.

Stakeholders whose attachments to the area were primarily economic suffered the greatest financial losses. They were angered at the lack of channel maintenance that occurred before the 1995 flood. Stakeholders whose attachments to the area were based on environmental concerns were also angry, but for different reasons. They were angered by the devastation that occurred to the riparian habitat after the 1995 flood, when the channel was finally dredged.

Stakeholders from both groups acknowledged that environmental studies required by law under the Endangered Species Act of 1973 produced results that prevented the Pajaro River channel from being maintained or dredged prior to the flood. The Endangered Species Act is a subject that concerns stakeholders at all levels of involvement. According to an article in the local newspaper, The Watsonville-Pajaronian Register, members of Congress whose districts were hurt by flooding during 1995 place part of the blame on the Endangered Species Act (Freedman, 1997, March 27; Freedman, 1997, May 10). They claimed the law discouraged upkeep of the earthen levee, thus causing a weakening of the levee that resulted in its collapse (Freedman, 1997, May 10).

The Endangered Species Act of 1973

Signed on March 3, 1973, Congress ratified the Endangered Species Act. The purpose of the Endangered Species Act was to identify species of fish, wildlife and plants that have become extinct as a consequence of economic growth and development, and to identify endangered species: species of fish, wildlife and plants whose population has become so depleted that they are threatened with extinction. Congress also mandated that

Federal agencies work in conjunction with State and local agencies to protect endangered species when addressing water resource issues (U.S. Fish and Wildlife Service 1998:2). Section seven of the Endangered Species Act stated that any Federal agency, in cooperation with the Secretary of Commerce, must assure that any action funded and carried out by that agency will not jeopardize the existence of any endangered or threatened species. Such “agency action” must not result in adverse modification or destruction of habitat listed as critical (U.S. Fish and Wildlife Service 1998:13).

Section seven clearly stated that all stakeholders involved in implementing the flood control project must be in compliance with laws mandated in this section of the Act. After the Army Corps of Engineers completed the required study, the report revealed that nine federally listed endangered species, two proposed endangered species, one threatened species and thirteen species which were candidates for protection under the Endangered Species Act were located in the area (U.S. Army Corps of Engineers 1997b:21).

At the time of the social impact assessment study, the Steelhead trout did not have official status as an endangered species under the Endangered Species Act, although environmentalists were concerned about the fish due to its dwindling population in the Pajaro River. An animal that was on the list was the Santa Cruz long-toed salamander (U.S. Army Corps of Engineers 1994:10). As stated above, environmentalists became dedicated to ensuring the habitat of the salamander, as well as other species of flora and fauna, a fact that infuriated various other stakeholders. Several stakeholders who were angered at the

strict environmental regulations believe that the salamander was not actually seen in the area; they believed its existence was just an assumption.

According to stakeholders from both camps, a number of factors contributed to the development of the riparian habitat. Not all problems were correlated with environmental laws and regulations. To begin with, they claim a twenty-year period existed where no maintenance occurred along the Pajaro River and its tributaries. Peggy remarked that neither Santa Cruz nor Monterey County wanted to pay for the clean up of the channel. Additionally, a seven to ten year drought during this time span provided no motivation to clean the channel. Eventually a lush riparian corridor developed, after which clearing the channel became, as one stakeholder stated, “a tug-of-war with the Department of Fish and Game and the California Coastal Commission.” The California Coastal Commission is a regulatory agency that retains jurisdiction over public trust lands, including the Pajaro River. Section 31258 of the Coastal Conservancy Act of 1976 requires that flood control projects be submitted to the California Coastal Commission for approval (MIG 2001:2,5).

Another factor that contributed to the levee failure was the sedimentation build-up at locations where the levee is set back from the main channel. Sedimentation build-up from previous flooding resulted in the formation of benches that reduced channel capacity. Tree growth, underbrush, and the accumulation of trash, including old tires and a refrigerator, also contributed to the reduced carrying capacity of the channel. An exploding ground squirrel population only worsened these conditions; the squirrels burrowed large holes in sections of the levee, thus weakening the levee (Alvarado 1995, March 7; Wallace 1995a, March 8). No matter what their stance on environmental issues, stakeholders realized that

all the above factors helped contribute to the levee failure in March 1995.

The Social Construction of Space

These factors not only contributed to the 1995 flood, they led to the transformation of the Pajaro River levee system into the Pajaro River riparian habitat. In this sense, the Pajaro river levee system was both a product of social relations and a producer of social relations. The 1949 levee system was socially produced, through its design and construction, in a different sociopolitical and historical context. At the time of construction, the sole purpose of the levee was to provide flood protection for the area. Over time, both political and economic forces transformed the physical structure of the levee and the Pajaro River.

Peggy's statement that neither county wanted to fund the clean up of the river channel reflects how both economic and political factors resulted in this transformation. Once the river became a riparian habitat for endangered species, political forces ensured that the physical alteration, or transformation that occurred along the river, remained. This transformation serves as an example of Low's theory that space that is socially constructed through contested patterns of use and attributed meanings.

To stakeholders whose attachment to the area is based on environmental concerns, the river is more than a flood control channel; the river is a riparian habitat. The physical properties of the river should be that of a riparian corridor; flora and fauna living in the river must be protected. Stakeholders with the opposing view, those whose attachment to the area is primarily economic, believe the river should be used to control flooding in order to protect the economic concerns of all stakeholders. These stakeholders' ideologies have resulted in

public debates over the social construction of the meaning and appropriate use of public space.

These debates are construed by Pajaro stakeholders as class biased. The Pajaro stakeholders I interviewed believe that because the Town of Pajaro is impoverished that Pajaro residents “don’t count.” To residents and business owners in Pajaro, compliance with environmental law seems absurd, when maintaining a riparian habitat results flooding that causes them to lose everything they own. They cannot financially afford to be concerned with environmental issues. Any stakeholder who lives or owns a business in Pajaro has already experienced enough economic hardships, due to the 1995 flood.

The March '95 Flood

Early in the month of March 1995, the area experienced extremely heavy rainfall. On the evening of March 9, 1995, between midnight and 1 a.m., Pajaro River water levels reached thirty-one feet, four inches. Thirty-one feet was the official flood level (Schilling 1995, March 10). Watsonville police and other emergency workers warned two thousand residents of the Bay Village and Pajaro Village retirement communities to evacuate their homes. On March 11, at approximately 1:30 a.m., water breached the Monterey County side of the Pajaro River levee, flooding the Town of Pajaro (Brinson 1995, March 15; Gibbs 1995:34-35).

The levee was designed to withstand 19 thousand cubic feet of water per second. When flooding occurred, the water flow had reached 22,500 cubic feet per second. Although officials from both Monterey and Santa Cruz Counties attested to the fact that the river's capacity had been reduced by 50 percent (Raider 1995b, March 18) due to fallen

willow trees and sandbars that had accumulated during a period of drought over two decades prior to the 1995 flood, they believed flooding would have occurred even if the channel had been cleared. Their sentiments were supported by Tom Kendall, assistant chief of planning and maintenance for the Army Corps, who stated the reason the flood occurred was because “The flow of the channel was exceeded. Flooding was inevitable” (Raider 1995a, March 16).

After the flood, Senator Henry Mello drafted legislation to grant Monterey and Santa Cruz Counties a one-time waiver from the California Environmental Quality Act. The waiver would allow dredging of the Pajaro River channel. Local farmers and business owners banded together to help pass the legislation (Raider 1995b, March 18, 21). On March 18, Governor Pete Wilson declared the area a state of emergency. Prohibited clearing of the channel was now exempt from the Endangered Species Act (Raider 1995d, March 27). Earlier in March 1995, the Zone 7 Flood Control District of Watsonville, CA had allocated \$380,000 for an environmental impact study of the Pajaro River. After the flood, the funds Zone 7 had allocated for the study of the Pajaro River were used to fund an emergency cleanup on the Santa Cruz side of the Pajaro River (Raider 1995c, March 21).

Three weeks after the March 11 flood, clearing of the channel on the Santa Cruz County side began. Cleanup occurred on the Santa Cruz side of the river only, because funding came from the Zone 7 Flood Control District, funds from fees paid by property owners in south Santa Cruz County. The cleanup would take three to four weeks. The clearing was expected to make the river capable of handling a 20-year storm, one that has a

five percent chance of occurring each year. It was a 20-year storm that caused the March 11 flood (Wallace 1995c, March 27).

Local environmentalists from the Sierra Club and Watsonville Wetlands Watch proposed to stop the clearing until more studies could be conducted. The clearing would mean almost a complete loss of vegetation. The environmentalists argued that vegetation and trees were necessary components of a structurally sound channel (Wallace 1995c, March 27). Regarding the clearing, the people of Pajaro felt that they had been abandoned by the County of Monterey. One Pajaro resident angrily remarked, “they haven’t done what is necessary to clean the river because they’ve passed the buck” (Raider 1995d, March 27).

Induced Flooding

Several people, including Peggy and Alexis, believed that not all flooding problems were simply related to rainfall in their immediate area. They explained that, in 1995, rainfall in the San Benito River drained into the Pajaro River, raising water levels over existing capacity. In 1997, heavy rainfall into Uvas Creek and areas of southern Santa Clara County fed into the Pajaro River, causing the level to rise dangerously high.

The Pajaro River watershed, an area consisting of 1,300 square miles, is located approximately 75 miles south of San Francisco in the Coast Range Mountains. The watershed includes the upper basin Counties of Santa Clara and San Benito, as well as the lower, sub-basin Santa Cruz County and portions of Monterey County. The Monterey and Santa Cruz sections of the Pajaro River are located downstream, in the sub-basin of the watershed, so this section of river carries water from the two upper basin counties. This fact

caused Peggy to remark, “We did not flood because of rain in this valley; we flooded because of what was going on in San Benito County and Santa Clara County.”

Peggy also blames the large degree of development that is taking place in Santa Clara and San Benito Counties for increasing runoff into the lower section of the Pajaro River. The economic boom of Silicon Valley (Santa Clara County and outlying areas) in the late twentieth century was creating a high demand for more housing, shopping centers, and schools. The list goes on and on. Construction was taking place at an unprecedented rate in this area. Peggy questioned where all the water that used to flood this area would go. “Water will not percolate into cement,” she added.

Alexis commented, “Induced flooding is against the law. Counties upstream cannot force water onto their neighbor.” Most local stakeholders believed that Santa Clara and San Benito Counties should be responsible for helping to financially support a flood control project along the lower section of the Pajaro River. To address this issue, State Senator Henry Mello proposed a Four-County Joint Powers Agreement, a bill attempting to set up management of the Pajaro River by the four counties in the Pajaro River watershed. At the time this legislation failed, so the four counties were encouraged to assist with maintenance and address upstream problem on a voluntary basis. This effort did not succeed; Santa Cruz and Monterey Counties were the only two counties involved in trying to find a flood control solution although an interest in four-county joint venture prevailed.

Rate of Flow

Pajaro stakeholders believed that development in Santa Clara and San Benito Counties has not only increased the amount of flow, but also the rate of flow, the speed of

water moving through the Pajaro River. They expressed concerns over any project that would increase the velocity of water flowing through the Pajaro River. If the creek floodwall alternative were to increase the flow of water to the Pajaro River, they feared the Town of Pajaro would suffer from increased flooding. Concerns over the alternative prompted Alexis to ask, "How is the Army Corps going to assure us that this water being speeded up isn't going to cause us more damage in Monterey County? It seems like everybody can put stuff on us. Excuse me, but it's the ultimate screw you."

Benefit to Cost Ratio

As I was gathering information for the social impact assessment study, Alexis explained the concept of the benefit to cost ratio. The benefit to cost ratio (BC ratio) looks at economics of a flood control project, including what area would be protected by the project and how much protection can be provided for a specific amount of dollars. In July of 1994, Colonel Walsh of the Army Corps of Engineers determined that on the south side of the river (the Town of Pajaro and surrounding farmland) there was no benefit-to-cost ratio. Regarding flooding in the Town of Pajaro and surrounding farmland, the Army Corps decided that it would cost less to do what is called a flood fight, to wait until there is a problem and then fix it. Alexis believed that the Army Corps of Engineers was sending a strong message to the people of Pajaro: "You're just not worth it!"

Alexis believed the problem with the Army Corps' analysis of land value in Pajaro lies in the fact that the Corps applied the standard for what it would cost to buy an acre of land in the Midwest to land values in the Pajaro Valley. "Here an acre of land rents for \$2,500 an acre!" she exclaimed. Alexis commented that local farmers worked

endlessly to point out to the Army Corps that they could not apply mid-western standards to California. She said farmers were petitioning for a new local cost-to-benefit analysis to determine the correct value of an acre of land in the Watsonville area. "It's criminal. They don't understand what land is worth over here," she stated. "The most valuable land, worth \$25,000 an acre, is located in the Pajaro area!" Alexis remarked, "I'm sick of being told, cost to benefit ratio, you're not worth it."

Peggy believed that the creek floodwall alternative would provide protection against flooding for the City of Watsonville, but not for the town of Pajaro. "I don't understand why we're always the last," she remarked. "No one wants to take care of us." Watsonville and Pajaro residents alike expressed the sentiment that the town of Pajaro bears the brunt of flooding because, as one resident stated, "Pajaro is just a little town of poor Mexican farm workers." Alexis was quick to mention that 235 acres of strawberries puts over 250 people to work for almost nine months a year. She stated that almost all of the workers employed by her farm live in Watsonville. "Of these workers, 53 are buying homes in Watsonville." Her point was: (1) revenue from income generated by workers on a Pajaro farm in Monterey County goes to Santa Cruz County, and (2) this fact demonstrates that land in Pajaro, Monterey County, is not insignificant and is worth receiving flood control protection. After the flooding in 1995 another benefit-to-cost analysis was conducted. Residents hoped to see a project to alleviate flooding in the Town of Pajaro (U.S. Army Corps of Engineers 1997b:25)

Suspicious Cause of Flooding

One resident of a migrant camp located outside the Town of Pajaro commented that during the flood of March 1995, someone came to the camp and asked residents if they would be willing to evacuate their homes so the area could be flooded. They refused to leave. Rumor has circulated throughout the area that the levee was broken on purpose so that the Town of Pajaro would flood, thus sparing the City of Watsonville. Residents state that the first levee break during 1995 was upstream, on the Santa Cruz County side of the levee. Pajaro stakeholders question why there was a break later on, downstream, on the Monterey County side of the levee. In an interview with the local newspaper, one Pajaro resident echoed the sentiment of stakeholders from both Watsonville and Pajaro, as he angrily remarked, "We know that Pajaro was sacrificed to not flood Watsonville" (Raider 1995b, March 18).

Extreme anger over the 1995 flood, coupled with extreme financial losses, prompted Pajaro stakeholders to file a class action suit against the County of Santa Cruz, the County of Monterey, and Caltrans. The two counties were sued because they failed to provide channel maintenance necessary to prevent flooding, and Caltrans was sued because of proposed improper construction of Highway One. Highway One runs perpendicular to Pajaro farmland. Peggy explained that Highway One was built so far above ground level that it acted as a dam after the flood, allowing floodwater to sit on adjacent strawberry field and rot the berries. Plaintiffs stated that Caltrans should have built culverts to allow water to pass under the highway in the event of a flood.

The case of Aeriola et al v. Monterey County, Santa Cruz County and Caltrans, case number H021339, was filed at the Monterey County Courthouse. Peggy believes that the counties of Santa Cruz and Monterey, and Caltrans never thought anything would come of the lawsuit. Commenting on the level of community involvement, Peggy estimated that approximately 250 to 300 plaintiffs were involved in the lawsuit. She stated that attorneys had so many boxes of testimony and depositions from local stakeholders that they finally had to assign a number to each of these stakeholders. They were unable to remember all plaintiffs by name. The plaintiffs included business people, farmers, and local residents. Stakeholders who never joined the lawsuit claimed they were not told about the lawsuit, or believed they did not lose enough in the flood to file a lawsuit. Some lost so much that they could not afford to hire an attorney, although many of the lawyers worked on a contingency basis.

The San Francisco-based law firm, Morrison and Foster, and the local law firm of Omar James and Johnson represented the plaintiffs. Most of the plaintiffs under Omar James and partner Johnson retained services on a contingency basis. Other lawyers involved in the suit often represented one or two clients. Peggy remarked that Smuckers used attorneys from their insurance companies. Smuckers' lawyers were trying to recover money that the insurance company paid out the company after the flood.

Peggy believes that the lawsuit went as well as it did for three reasons: the law firm out of San Francisco was very prestigious, had many partners, a huge law library and a large staff. They were able to handle large volumes of work. Omar James was a local firm, so they had the local expertise. The attorneys working together, each with

their area of expertise, were able to accomplish feats that one single attorney could not possibly accomplish. The jury found the two counties and Caltrans guilty. After the verdict the Counties of Monterey and Santa Cruz and Caltrans filed an appeal. The case is in the Supreme Court today. Once again stakeholders face lengthy bureaucratic delays. Peggy stated that she wouldn't be surprised to see this case in the court system for so many years that plaintiffs' grandchildren will be the ones to finally see some money.

In spite of the lengthy delay in receiving a financial settlement, stakeholders felt vindicated and empowered by the win. Peggy's sense of elation denoted the sentiment that something finally when right for the residents and business owners of Pajaro.

Conclusion

In this chapter we have looked at the various factors stakeholders perceived to cause the March 1995 flood, and actions stakeholders took as a result of the flood. The local stakeholders were divided into two camps that understood place and causation quite differently. One group saw place, and perceived risk as a function of environmentalism. The other group, those with an economic stake, viewed the flood and control measures as a process in which their economic interests defined place. This meant that any mitigation would be viewed through quite different lenses. Opinions regarding the main option offered by the Army Corps of Engineers, the creek floodwall alternative, will be presented in the next chapter. We will again see that economic and environmental attachments to the area divide stakeholders' opinions on preferred flood control procedures.

CHAPTER FOUR

CHOOSING AN ALTERNATIVE, THE SOCIAL PRODUCTION OF PLACE

In the social impact assessment study, every interviewee agreed that something needed to be done about flooding in the Pajaro Valley, and it needed to be done soon. Stakeholders expressed frustration over the bureaucratic economic and environmental factors that resulted in lengthy delays. They believed that the time and money spent on studying the area should be used on the actual construction of the project. Stakeholders from both Watsonville and Pajaro feared the area would suffer the devastating effects of more flooding before a new project was constructed. However, stakeholders disagreed about how the physical construction of the project should proceed. Such lack of consensus was intimately connected to how individuals and groups defined their own sense of place. Their socially produced sense of space differed significantly in how they understood place. Each perspective imagined a different plausible future Pajaro, one in which daily life could be reasonably conducted.

Stakeholder Involvement in the Social Production of Space

Stakeholder involvement in the implementation of a new flood control project illustrates how social, economic, ideological, and technological factors all contribute to the physical construction of a material setting. As with Low's typologies of place attachment, the factors that influence the social production of space often overlap, or fall into more than one category. Stakeholder opinions regarding the physical construction of a new flood control project also reveal how the built environment serves as a non-verbal

representation of identity, morality, and social standing within the community. In the previous chapter it was clear that different stakeholders believed the flood was caused by different factors. Flowing out of those beliefs, people held diverse opinions about what should then be done to mitigate future flooding, particularly in response to the creek floodwall alternative, discussed in this chapter. Implementation of the creek floodwall alternative would have the greatest impact on the residential area along Corralitos Creek, the retirement community of Bay Village, farmland along the Pajaro River, the Town of Pajaro and sections of the City of Watsonville. For this reason, the responses to the creek floodwall alternative illustrated below pertain to these specific areas.

The Creek Floodwall Alternative

Previous to my employment, the Army Corps of Engineers had been studying various flood control alternatives. The creek floodwall alternative was the fifth alternative being considered by the Corps of Engineers, and thus named Alternative 5. At the time I was hired, the creek floodwall alternative, Alternative 5, was the only alternative under consideration for construction. I was provided with the specifications on Alternative 5, and was asked to present these to stakeholders for their input and reaction.

Alternative 5 included the construction of 3-foot high floodwalls, composed of steel sheet piling with a reinforced concrete cap, along both banks of Corralitos Creek for 6,100 feet on each side, along 1,400 feet of the left bank of Salsipuedes Creek upstream of Lakeview Road, and on top of 1,000 feet of existing levee at Salsipuedes Creek near the confluence with the Pajaro River. In addition, two pumping stations would be

constructed, one on the south side of the Pajaro River east of Highway 1, and another on the east side of the Pajaro River levees at the confluence with Salsipuedes Creek.

Alternative 5 would also include erosion-control measures along with channel improvements and installation of two culverts with flap gates at the confluence of Salsipuedes Creek and the Pajaro River (U.S. Army Corps of Engineers 1996:10).

Technical Concerns

Clearly any flood control alternative would have to consider the limitations and advantages of technical factors. Stakeholders from federal and local governmental agencies with a background in engineering have provided the technical expertise needed to design and construct the new project. These agencies include the Army Corps of Engineers, the Planning and Public Works Departments of the Counties of Monterey and Santa Cruz. Opinions on technical factors that must be explored when constructing a flood control project were also a concern to professional stakeholders. Some of these stakeholders were engineers; others were local residents who expressed a technological interest in the project. Although floodwalls were deemed the least intrusive and most appropriate means of flood control protection, the following technical concerns were expressed over construction issues.

Floodwall Construction Parameters

Stakeholders were concerned that a floodwall only three feet in height might not provide adequate protection, especially at the confluence of Salsipuedes Creek and the Pajaro River. Appropriate sheet piling length was another concern expressed by local engineers. They feared that nine feet of sheet piling would not be deep enough to secure a floodwall. One engineer commented that water would erode the soil below the nine-

foot level. He envisioned that the floodwall would topple over and “float away.” These stakeholders also raised the issue of stabilization, believing work needs to be done on existing banks before a floodwall could be constructed. They explained that erosion was rapidly occurring along the bank of Corralitos Creek where no levee exists. Erosion of this bank had recently resulted in a tree falling into the creek. Tree removal and earthwork needed to be done just to provide a stable pad to build a floodwall.

Concern over the integrity of the levee was also expressed by stakeholders who questioned whether or not the levee was physically sound. A Bay Village resident commented that lack of attention to “the burrowing rodents,” the ground squirrel, was undermining the levee. He also feared that unknown damage could have occurred during the 1989 earthquake, further weakening the levee. Another local stakeholder mentioned that he observed three or four weak spots where water undercut the levee. One farmer noticed a hole in the levee along the Santa Cruz County side of his property, close to the site where the levee broke in 1995. A section on the Monterey County side near Allison Road is ready to “blow out,” the farmer commented. “If it blows, (during a flood) there will be nothing to come back to.”

Farmers were also knowledgeable regarding the topic of erosion and bank reinforcement. One farmer feared the Corralitos Creek bank would erode to the point where the water would flood his fields, after which, he remarked, the water would continue down to the retirement community of Bay Village. Another farmer was concerned that unless the bank was built up for the floodwall to sit on, a floodwall

located between his farmland and the creek would sit lower than the existing bank and provide no protection against flooding anyway.

Stakeholders commented that maintenance must be done on a yearly basis. One stakeholder believed that if channels and levees had been maintained properly, there might not be a need for a new flood control project. A Bay Village resident remarked that the ultimate “fix” would involve dredging the channel another six feet deep and covering the walls with concrete. A second Bay Village resident who shared a similar sentiment stated: “Why not riprap the face of the levee and be done with it?” Ripraping would involve constructing a wall of stones or concrete chunks along embankment slopes to prevent erosion.

Concerns Over Floodwall Locations

Any plan to mitigate flooding would have to address where to physically construct a floodwall. Stakeholders believed that a floodwall constructed on existing levees would have to be located on top, right next to the paved walkway. If the floodwall was built closer to the center of the creek, the volume of water flowing during heavy rains would rise high enough to breach the floodwall, flooding nearby residences and farmland.

Farmers and homeowners also expressed suspicion that land alteration along the Corralitos and Salsipuedes Creeks may be more extreme than the Army Corps predicts. When the existing levees were constructed along the Pajaro River, locals were surprised at the actual width of the finished channel; they believed it would be much narrower. This occurrence had stakeholders questioning how far back from the center of the creeks the floodwalls would actually sit.

Stakeholders who owned land along Corralitos Creek preferred that floodwall locations be flexible to allow for different channel widths. One landowner suggested that floodwalls be positioned to follow the pattern of the low-lying areas along Corralitos Creek. To illustrate his point, this landowner took me on tour of the area. I could see that low-lying sections of Corralitos Creek alternate as the creek twists and turns; some are located on the east side of the creek, others on the west. One resident who owns a home along Corralitos Creek believed that additional floodwalls should be included in the creek floodwall alternative, Alternative 5, to include the area upstream along Corralitos Creek. She thought the Army Corps should consider the social cost of putting the floodwall in a particular location, stating there was a problem with flooding as far as the Hospital at Green Valley Road, and during the flood of 1997 the hospital nearly had to be evacuated.

Other Corralitos Creek stakeholders questioned the rationale behind Alternative 5, stating the alternative included floodwalls along a section of the creek where flooding had never occurred. They commented that Santa Cruz County kept the Corralitos Creek culvert under East Lake Avenue clear of debris, which reduced the risk of flooding along Corralitos and Salsipuedes Creeks in this area. One Corralitos Creek resident questioned the need for floodwalls on his property, stating that his backyard bordered a section of Corralitos Creek that is higher than the levee located on the opposite side. If flooding occurred in the area, he remarked, water would overtop the levee and flow in the opposite direction before it flooded his home. His neighbor asked, "Why create such damage by constructing a floodwall here when this section of the creek does not flood?"

Pumping Stations

Pumping stations were considered to be an important piece of technology. Pumping stations Pumping Stations helped to control or prevent severe flooding. Stakeholders believed that additional pumping stations, as proposed in Alternative 5, were a good idea. One of the proposed pumping stations under Alternative 5 would be situated near the farm Alexis owns, which is important, given the damage to her farm after the 1995 flood.

A Bronte Street resident whose home was spared by the use of a nearby pump in 1997 had this to say, “When they work, they can pump many, many gallons out. Pumping stations can do a tremendous job.” Several Watsonville residents believed that if pumping stations worked properly, flood protection provided by existing levees would be adequate, providing both were maintained.

Not all stakeholder reports on pumps were favorable. Different stakeholders commented that pumping stations had been known to fail quite frequently, and pumps could not keep up with the amount of water during a flood. A Watsonville business owner cited pump failure as one of the two causes of flooding in the downtown area in 1995, stating that pumps were not properly maintained by the City of Watsonville. In this sense, economic losses suffered by business owners in downtown Watsonville contributed to pump failure. Pumps, levees, and their maintenance are technical features imbedded in particular social and economic situations.

Economic Factors

After all the debate is concluded, economics will be the determining factor in the construction of the new flood control project. Almost every stakeholder mentioned in

this study has an economic attachment to the area. Economics factors are the primary concern for the Army Corps of Engineers. In addition to providing technical expertise in the designing and construction of the project, the Army Corps must pay 75 percent of construction costs. The Army Corps wants to provide the greatest amount of protection for each dollar spent on the project.

Economic issues are also of concern for the Counties of Monterey and Santa Cruz. The counties must pay a share of the construction costs as well as provide levee and river maintenance. Business owners, farmers, and residents of the Town of Pajaro and the City of Watsonville share an economic interest in the project as well, based on the financial losses they suffered after the 1995 flood, and the taxes imposed upon them for their share of costs for the new project.

Perceived Benefits to Watsonville Residents

Nearby Watsonville residents also had opinions about the floodwall alternative. From an economic and social standpoint, local stakeholders believed that a flood control project such as Alternative 5, if constructed along the Corralitos and Salsipuedes Creeks, would provide adequate protection against flooding for the City of Watsonville. Stakeholders commented that Corralitos and Salsipuedes Creeks had contributed to flooding in the past. When flooding occurred from Corralitos Creek, it followed Riverside Drive and flooded the downtown area of Watsonville. In 1982, the Salsipuedes Creek levee overtopped, flooding the downtown and nearby residential area.

Floodwall Preferences

Floodwalls were by far the preferred means of flood control protection among local people interviewed for the social impact assessment study; only one participant preferred the construction of a levee. Every farmer I interviewed preferred the construction of floodwalls. One farmer's objection to building levees along farmland was based on the social cost of having to interact with non-farmers should a levee rather than a floodwall be constructed. Adjacent farmland is not public domain, he commented, yet people who walk along the levees have complained about dust and the spraying of pesticides. Walls would discourage rather than encourage the presence of outsiders. Levees had economic consequences for farmers as well. Farmers objected to the construction of a levee because it takes up more physical space. If floodwalls were constructed between crops and the creek, they would not lose farmable land.

Farmers have already suffered a loss in revenue due to individuals picking produce growing next to levees, as mentioned earlier by the farmer who asked for a chair in exchange for his berries. Regarding his economic loss, this farmer remarked that during one season, he only harvested 60 percent of his crop along the levee edge. Leveegoers picked approximately 40 percent. With land worth \$25,000 per acre, he cannot afford such a loss. The loss of farmland due to construction of a new flood control project is only one of several economic factors concerning farmers and other stakeholders. Flood control assessment factors are another topic of economic concern.

Flood Control Assessment Issues

Peggy explained how funds are raised to provide maintenance along the Pajaro River and its tributaries. She stated that the Monterey County Water Resources Agency charges assessments on parcels located in Zone 1 and Zone 1A for levee maintenance. Monterey County residents in Zone 1 and 1A pay \$48 per parcel for maintenance; those in Zone 7, Santa Cruz County, only pay \$6 per parcel.

Santa Cruz County raises \$900,000 a year, Peggy commented. Within the next two years they will raise over \$1,000,000 per year. In contrast, the Monterey County assessment totals only \$275,000 a year, because the population is so small. Of the 1,300 square mile watershed, Monterey County comprises less than ten percent. With only ten percent of the land in a large watershed, and about a quarter of the assessment revenue for flood control, The Town of Pajaro, Monterey County, is expected to pay half of the maintenance along the Pajaro River. Peggy would like the Army Corps of Engineers to find the money to help the residents of Monterey County keep the river properly maintained.

Peggy was angered at the lack of levee maintenance and flood control protection given to Pajaro residents, given that Monterey County residents pay for more than their share of protection costs. She was also extremely angry over hearing that the levee would be repaired if it broke. By then flooding would have occurred and the damage would be done. Peggy commented that local stakeholders complained, they were told, "If you have a problem with flooding, move." Exasperated, she exclaimed, "Why should we move?"

Flooding in the area is a man-made problem. We can't just pack up and leave.”

Channel and Levee Maintenance

As indicated above, channel maintenance was one of the most widely discussed topics among stakeholders, second only to that of flooding in Pajaro. Economically, the consensus among local stakeholders was that a flood control project would be a futile effort and a waste of taxpayers' money if river and creek channels, as well as levees, were not maintained. Stakeholders expressed emotions ranging from annoyance to rage at the lack of channel maintenance along the Pajaro River before the March 1995 flood. Stakeholders explained that once the Army Corps of Engineers completed construction of the original levee system, the Counties of Santa Cruz and Monterey were responsible for maintaining the levee. As Peggy mentioned, local stakeholders were taxed each year for levee maintenance by their local flood control districts. Stakeholders expected the levee to be maintained.

After the March 1995 flood, stakeholders who were in favor of channel dredging saw results. The Pajaro River channel was dredged upstream from Highway 1 to Murphy Crossing. Maintenance was also conducted along Salsipuedes Creek, which included some sandbar removal and levee work. Residents commented that work along the Salsipuedes Creek was beneficial. During the storm of January 1997, water inside the levee along Salsipuedes Creek came to within one foot of spilling over. Stakeholders who live in the area believe that if the channel had not been cleared in 1995, it would have broken or water would have overtopped its banks in during this storm. Regarding the dredging of the

channel, one resident remarked, if the channel is not maintained, it can again be declared a natural habitat by the Department of Fish and Game.

It is evident that the issue of channel maintenance is one of extreme importance to stakeholders, and that local stakeholders are angered at both the Counties of Monterey and Santa Cruz for the lack of sufficient channel maintenance prior to the 1995 flood. Economic factors may have deterred channel maintenance, but environmental law was the ideological factor that contributed to the lack of channel maintenance

Ideological Factors

The ideological factors most prominent in this study are based on environmental concerns and environmental law. Environmental ideology is based on social ideals that reflect cultural values of a specific group of individuals. Environmentalism is a fairly recent cultural phenomenon, yet it is very powerful and carries a great deal of political clout. Environmentalism has provided a set of values for various stakeholders involved in this study, and environmental law backs up these values. Environmentalists were determined to ensure the existence of a riparian habitat. Overall, environmentalists were not opposed to Alternative 5, provided floodwalls were constructed rather than levees. Environmentalists believed that floodwalls would have the capacity to provide the needed protection against flooding, while taking up less space, less land, and inflicting minimal damage on the riparian habitat.

Environmental Concerns Regarding Floodwall Construction

Environmentalists believed that a floodwall constructed along six thousand, one hundred feet of Corralitos Creek would not disturb much vegetation if it were constructed

between the crops and the creek bed. However, environmentalists were concerned about the impact construction of floodwalls along other sections of Corralitos Creek would have on the riparian corridor.

Norma, a member of the Santa Cruz chapter of the Sierra Club, commented that since the Pajaro River was cleared, Corralitos Creek had become the most significant songbird habitat in the southern end of Santa Cruz County. She stated that environmentalists would prefer that floodwalls not be built along this section of the Creek. Clearing vegetation in this area would result in a tremendous loss of habitat for wildlife. Norma explained that the canopy of vegetation rises very high, that there are various levels of habitat that exist from the ground up. Animals inhabit each level of vegetation. The only way to secure their habitat is to build floodwalls outside the riparian corridor, along the farmland.

Doug, a member of a local environmental group, stated that local environmentalists were also concerned over removing trees in the residential areas along Corralitos Creek that border the levee. There are no trees along the levee side of the creek. If too many trees and shrubs are removed from backyards, shade will not be provided for the Steelhead trout. He explained that, until recently, the area was a prime Steelhead habitat, but numbers have been drastically reduced. The trout population diminished for many reasons, including habitat dredging.

Doug reported that efforts from local environmentalists were underway to restore the Pajaro River and Corralitos and Salsipuedes Creeks as a fish habitat once again.

Environmentalists wanted to ensure that the biological value of the area was not further compromised through the construction of a flood control project.

Environmentally-Sound Channel Maintenance

Local environmentalists were outraged that Governor Pete Wilson allowed the Pajaro River channel to be dredged after the 1995 flood. Doug stated that a group of environmentalists sued the state, taking the case to all the way to the Supreme Court. They claimed the Governor was in error; before the dredging occurred an environmental review should have been conducted. Doug referred to the dredging as a “disastrous clearing of the channel,” and “a travesty.” All vegetation was cleared except a tree approximately every 75 feet. He commented, “The area upstream of Highway 1 was just blasted. Environmentally, it ruined the habitat for wildlife and birds, although from the standpoint of providing flood protection it was just enough.”

Doug suggested that environmentally sound maintenance include a low-flow channel in streambeds that could be “ripped” to deepen the channel where vegetation has already been cleared. Remaining vegetation would prevent erosion. Trees would also prevent erosion and shade a low-flow channel to keep the water cool for fish and inhibit the growth of cattails that choke out the stream. A low-flow channel would allow water to move through faster, thus scouring and cleaning the channel.

Environmental factors are some the most highly contested among other stakeholders, especially among those with strong economic and social concerns. Involvement in the environmental movement reflects social standing and moral values of these individuals. Although these values were not representative of all local stakeholders,

nobody wanted to see wildlife disappear due to dredging. Preserving wildlife habitat was important to most stakeholders. However, stakeholders with economic and social concerns believed that too much emphasis was being placed on the habitat of animals rather than on the habitat of human beings. Pajaro stakeholders believed that if something were not done to relieve flooding in the area, their own habitat would be in danger. These stakeholders felt they were the "endangered species."

Social Factors

The social factors that influence the construction of a new flood control project were so important to the Army Corps of Engineers that they hired me to do a social impact assessment study. The dominant social factor indicated by those I interviewed for the study was concern over the business owners, farmers and residents of the Town of Pajaro. Every person I interviewed talked about flooding in Pajaro, and the financial and emotional devastation the flood caused to these stakeholders.

A strong sense of community in the area was evident. There was an acute awareness among all stakeholders that flooding hit the poor the hardest. Local stakeholders commented that Pajaro was considered to be a poor farming town. Several believed that the town was allowed to flood because the population is poor and small in numbers.

Protection for the Town of Pajaro

The main critique of Alternative 5 was that it would not address flooding in the Town of Pajaro. Some feared completion of Alternative 5 would actually cause induced flooding in Pajaro. The people of Pajaro felt they were being dumped on, literally and

figuratively. One resident of Bay Village remarked, "It's God-awful to watch your neighbors being flooded." She believed that if a flood control project did not benefit the Town of Pajaro, there would be "hard feelings." She would be opposed to such a project. Her sentiment echoed that of Watsonville stakeholders.

Concern was expressed over the level of protection. People were not sure about the plan to raise Corralitos and Salsipuedes Creeks to a 40-year level of protection, and leave the Pajaro River levees at their present 30 to 35-year level of protection. Many expressed the concern that this would cause flooding in the downstream section of the City of Watsonville as well as in the Town of Pajaro.

A local engineer suggested the implementation of Alternative 6. This alternative involves the incorporation of Alternative 5 with additional floodwalls along the Pajaro River from Highway 1 to Murphy's Crossing. The engineer believed this alternative would be best for providing protection for the entire region. "Alternative 5 is good for what it does," he remarked, "but since it doesn't address the Pajaro River. Alternative 6 would be my preference." During the time of the social impact assessment study, the Army Corps did not reconsider Alternative 6. The Army Corps simply wanted to know what effects local stakeholders thought Alternative 5 would have on the area. Among those issues were easement rights aesthetics.

Easement Issues

The Army Corps wanted to know if local stakeholders would mind giving up the necessary land to construct a flood control project. Property easement rights were not a concern for stakeholders who had experienced flooding of their homes. These

stakeholders' consensus was that easements required for floodwall construction would not involve the loss of a significant amount of land. Instead, concern was expressed over easements that would be required should a levee be chosen for construction rather than floodwalls.

Sentiments regarding easement issues were mixed among residents who owned homes along Corralitos Creek. The property line of these residents extended to the middle of the creek. A few of the residents that I interviewed who owned a home along Corralitos Creek did not object to property easements necessary to construct a floodwall, or to the ensuing encroachment of the floodwall onto their property. One homeowner did express concern over losing property, remarking that if the county took the easement they are allotted, so much of her backyard would be lost that she would "lose half her jacuzzi."

Another Corralitos Creek resident believed that damage to the residential area along the creek by construction of floodwalls would be severe. "Heavy equipment would have to be brought in through someone's backyard," he stated. "There is no other access to the creek." He was concerned about the effect construction would have on the beauty of the area. The Army Corps of Engineers was concerned about the manner in which a floodwall or levee would interfere with the aesthetic value of the area.

Aesthetic Issues

I asked stakeholders who reside at Bay Village, which is located along the Pajaro River, if they would object to looking at a floodwall behind their property. Most were not bothered by the possibility of a floodwall obstructing their view, although two residents said they would prefer the sight of a levee. When I asked one resident of Bay Village if she

would mind viewing a floodwall, she remarked, “Good heavens, no.” Her sentiment reflects the prevailing opinion of residents in the area. The consensus among Bay Village residents was that a flood control project comes first; aesthetic value was a secondary issue.

Opinions of Corralitos Creek residents varied regarding the topic of the aesthetic value of the area. One homeowner stated that aesthetic value would not be an issue if the floodwall were necessary to control flooding in the area. Commenting on the trees located in his back yard, he stated, “Some trees are old and falling into the creek anyway.” Then he pointed to another old tree that was leaning over his house. He feared that one would eventually fall onto in his roof, insinuating that he wouldn’t mind if the Army Corps took that one too.

Other residents were not so inclined to give up trees or land. One resident whose home bordered Corralitos Creek expressed strong reservations over tree and vegetation removal from her backyard. She stated she would hate to see a single tree removed. “I’m one of those,” she remarked. She believes vegetation in the area is not only aesthetically desirable, but prevents flooding, and that the removal of undergrowth for levee repair in an upstream neighborhood contributed to flooding in that neighborhood. She believed that if needed, floodwalls should be constructed in areas where vegetation had already been cleared.

Stakeholders raised additional social issues regarding the aesthetic value. These issues reflected moral values and social standing within their community. One local farmer who believes floodwalls along his property would have to be taller than three feet to be effective, pondered the idea of a tall graffiti-covered wall. He remarked, “We’d look like

San Jose.” Noting a correlation between graffiti and poverty, a Watsonville resident commented, “Graffiti on floodwalls (of any height) is a given. The closer you get to Pajaro, the more graffiti you'll see.”

I also asked residents who walked, jogged, or biked along the existing levee how they felt about having a floodwall located along the levee. Their responses were less impassioned, as only one person polled lived nearby, and her home had never been flooded. All but one believed that the visual impact should be minimal, as the floodwall would be placed on the creek side of the levee. They believed that their view of the creek would not be entirely blocked, and that a flood control project was more important than their view.

Conclusion

In this chapter we have looked at stakeholder opinions on the technological, economic, social and ideological factors that are necessary for the social production of space. Opinions on the above factors have pitted one group of stakeholders against another, and demonstrate how the production of public space can be contested for ideological and economic reasons. Construction of the new flood control project is socially contested by environmentalists who fear destruction of the riparian habitat. At the opposite end of the spectrum, environmentalism is contested by stakeholders with social and economic concerns who feel that their habitat is being destroyed.

In chapter five we will examine how conflict over land use models such as the flood control project has prompted local stakeholders to band together with like-minded individuals to form different social groups. The chapter will look at local organizations that

have been formed to fight for flood control issues deemed appropriate by that group.

Attendance at stakeholder meetings will also be discussed, along with the latest alternatives for flood control. We will see how the language of political discourse gives voice to groups of like-minded individuals, and allows them to express their opinions in a public forum.

CHAPTER FIVE

POLITICAL DISCOURSE, COMMUNITY ACTION

In the first four chapters, I examined events that took place prior to the year 2000, during the first phase of this study. Chapter one introduced various stakeholders involved in the study and provided a theoretical framework for understanding stakeholder perspectives on flood control issues. Chapter two examined the theory of place attachment as it applied to stakeholders, to gain an understanding of why stakeholders feel the way they do about the area. Chapter three explored the social construction of space that resulted from the transformation of the Pajaro river levee system into the Pajaro River riparian habitat. Various stakeholders believe this chain of events led to the March 1995 flood and the subsequent lawsuit. Chapter four discussed stakeholder opinions of the creek floodwall alternative, Alternative 5. These opinions were based on stakeholder preferences for construction of the new flood control project as revealed through ethnographic interviews.

This chapter will present material gathered from the second phase of this study. We will look at how the factors in the social production of space have resulted in socially contested ideals. Political discourse among the different stakeholders, local, professional and organizational, gives a voice to these issues.

Political Discourse

The physical properties of the Pajaro River and its tributaries have both objective and subjective dimensions. The physical setting is objective in the sense that it is defined by a geographical location and specific geological factors. The physical setting is also

subjective. To one group of stakeholders, the river is viewed as a means of flood control. To another group, the river is considered to be a riparian habitat. These opinions reflect the ideals of opposing groups of stakeholders. Political discourse gives voice to these ideals as they are written in federal and state documents and voiced by stakeholders in a public forum, through their attendance at stakeholder meetings. These meetings allow individuals who share a common ideological stance to band together in groups, gaining a stronger voice and political clout. The political discourse spoken at meetings however, not only creates sub-communities, it reinforces the division between groups and reshapes the nature of the conflicts.

New organizations have been formed to deal specifically with stakeholder conflict and with other flooding issues in the area. Organizations such as the Pajaro River Watershed Authority and the Coordinated Resource Management and Planning team were federally mandated. Other organizations, such as Action Pajaro Valley and Together in Pajaro (Pajaro Juntos), were formed by local residents who shared a similar interest in flood control issues.

New Organizations Involved In Flood Control

In the spring of 1998 California Assemblyman Fred Keeley introduced the bill AB1986. The bill would mandate the creation of the Pajaro River Watershed Authority. The bill would require the Authority to address flood related issues, including the protection of life, public and private property, agricultural crops, environmental resources, watercourses, and watersheds from flooding. The authority was also authorized to apply for necessary state and federal funds, and collect approved assessments for the funding of flood

control measures. The agency would be comprised of officials from Monterey County, Santa Cruz County, the Zone 7 Flood Control District, and the Monterey County Water Resources Agency. Also included would be officials from Santa Clara County, San Benito County, and the Santa Clara Valley Water District.

Representatives from the four counties, in a joint powers agreement, would be required to develop and implement flood control projects. Resource conservation districts, comprised of the four counties, formed the Coordinated Resource Management and Planning team to deal with water management issues, including flood control (Monterey County Water Resources Agency, 1998).

The non-profit organization “Action Pajaro Valley” was created in 1998 by local stakeholders with a variety of community interests, including business, government, agriculture, labor, health, and environmental. Created to address the challenges and opportunities in the Pajaro Valley, the organization facilitated several outreach activities, in order to provide all residents of the Pajaro Valley with the opportunity to share their vision for the Valley and to participate in community planning (Action Pajaro Valley, 1998:2). Stakeholders from Action Pajaro Valley began to attend stakeholder meetings and became very involved in the flood control planning process.

Another local organization formed to deal with flood control issues was Together in Pajaro. This group was also created to provide the public with information on current social issues, including issues regarding flooding. The group is comprised of volunteers who organize agency meetings, and write a newsletter containing current local topics. Together in Pajaro addresses the issue of flooding from the standpoint of emergency preparedness, a

topic that is always of concern to locals. Members of Together in Pajaro are also actively involved in attending stakeholder meetings.

The Stakeholder Process

Previously Santa Cruz County had been the lead agency in working with the Army Corps of Engineers on flood control measures. Monterey County stakeholders complained that Santa Cruz County officials were excluding them from the planning process.

Commenting on the planning of flood control concepts, a Monterey County Supervisor remarked, "It's been shoved down our throats and we don't like it. We're going to have to work together." Since the town of Pajaro suffered the most damage from flooding,

Monterey County stakeholders insisted on being included in the planning process. This problem prompted the Santa Cruz County Zone 7 Flood Control and Water Conservation District to ask Congressman Sam Farr, (D-Carmel), to facilitate a series of stakeholder meetings, allowing for community input (Santa Cruz Sentinel, February 10, 2001).

To begin this process, on May 24, 2001 the Coastal Conservancy authorized the allocation of \$250,000 to help fund local stakeholder meetings and develop a River Concept Plan (Project CP 1-01). Representatives from the office of Congressman Sam Farr, from Santa Cruz and Monterey Counties, and resource agencies were to be included in the planning process. Local stakeholders, including landholders, business owners, and residents who were active in the community, were asked to participate. To assure compliance with environmental laws, resource agencies including the California Department of Fish and Game and the United States Fish and Wildlife Service were included in the planning process (Coastal Conservancy Commission 2001:1,5). These actions facilitated the beginning of the

stakeholder meetings. Stakeholder meetings would provide an open forum for the expression of opinions regarding flood control issues.

Stakeholder Meetings

The first stakeholder meeting, sponsored by Congressman Sam Farr and the Counties of Santa Cruz and Monterey, was held in June of 2001. The goal of the meeting was to reach a consensus on a community flood control concept for the Pajaro River and its tributaries. Stakeholders meetings were scheduled to be held approximately twice a year, until the spring of 2003, when a consensus must be reached regarding the implementation of the new flood control process. The new project concept would be included in the Arm Corps of Engineer's Pajaro River Levee System Reconstruction General Reevaluation Report, and studied for possible implementation (MIG, 2001:3; Santa Cruz County, 2001).

Stakeholder meetings would be facilitated by members of a working group. The group included hydraulic engineers, planning process consultants, executive and technical staff from the Counties of Monterey and Santa Cruz, congressional district staff and the Army Corps of Engineers. The working group was responsible for synthesizing information and ideas, and presenting project design options to stakeholders for consideration. Results from stakeholder meetings, listed below, determined that some design principles were completely unacceptable to local residents.

Unacceptable Flood Control Measures

Ultimately, Alternative 5 was rejected by local stakeholders. The project only involved improvement to the Pajaro River tributaries, Salsipuedes and Corralitos Creeks. As stakeholders continuously stressed, Alternative 5 did not address flooding along the

Pajaro River. At the insistence of local stakeholders like Alexis and Peggy, a new cost to benefit study was conducted by the Army Corps of Engineers. The study demonstrated that the cost-to-benefit ratio for land along the Pajaro River was positive; in other words, it would cost the government less to build a new flood control project than to it would to pay for damages ensued after a flood.

As a result of these new findings, a new flood control project would have to include both the Pajaro River and its tributaries. To address this issue, the Army Corps of Engineers designed a variation of Alternative 5, a “pure floodwall/levee raise” to be considered for the Pajaro River and its tributaries. The pure floodwall/levee raise alternative was also rejected by the majority of stakeholders. The alternative involved the construction of large, structural floodwalls, possibly as high as eight feet. The second option included in the variation of Alternative 5 was to raise the levee the same height. To construct walls this high, the bridge between the city of Watsonville and the Town of Pajaro would have to be rebuilt. The Bridge was badly damaged in the March 1995 flood and construction of the new bridge was just completed. Nobody wanted to tear down the bridge and start over (MIG 2001:4-7).

Residents of Bay Village were opposed to this variation on Alternative 5. They did not object to the three-foot high floodwalls being considered in Alternative 5, but they did object to the construction of floodwalls eight to ten feet in height. They believed floodwalls that high would be “an ugly sight.” Concerns that floodwalls might be covered with graffiti increased proportionately with the Army Corps’ proposed increase in floodwall height. Another concern among Bay Village residents was public safety. They feared that

floodwalls that high would hide a crime being committed against individuals walking or riding bikes along the levee. The walls would also block the scenic view along the river for those using the path. These stakeholder objections prompted a campaign to study additional flood control alternatives.

Major dredging and channel excavation was also proposed and dismissed as an option. Studies of the area revealed that some vegetation is necessary for bank stability and to protect hydraulic capacity. Environmental law would also prohibit such an act, so community consensus would never occur. Pure levee setback was also considered and rejected. This option would involve acquiring a setback of two hundred and twenty five feet along both sides of the river, impacting homes and valuable farmland. A consensus on the alternative would never be reached.

Other project options that had been eliminated were upstream retention/detention only. Flood detention facilities upstream would only address limited volumes of water. The main cause of flooding in the area is rain clouds that head inland from the ocean during a storm. The clouds dump most of their rain on the coastal communities before reaching the upstream areas (MIG 2001:5-7).

Proposed Design Criteria for Maximum Consensus

In order for the Army Corps of Engineers to implement a flood control project, stakeholders must agree on a project design. The working group has determined that a “hybrid” approach, creating an alternative with a combination of elements, would be best to gain group consensus. The elements include some floodwall/levee raising, bridge

modification or replacement, some vegetation management, some dredging, and some setback onto agricultural land.

The proposed criteria for maximum consensus involves the following: (1) no setbacks and a maximum floodwall/levee raise of four feet in urban areas, (2) a maximum 100-foot setback and levee raise of five feet in agricultural areas, (3) some vegetation for stability permitting, riparian habitat, and maintainability, (4) existing levees need to be reconstructed, and (5) a 100-year level of protection is desired (MIG, 2001:4,5; Santa Cruz County 2001:2,3).

No single flood control design will accommodate the entire area. As a result, the Pajaro River and adjacent lands have been divided into seven different reaches (see appendix B). Each reach is comprised of a geographical area that includes a section of the Pajaro River, Corralitos and Salsipuedes Creeks, and adjacent land, and will require a different method of flood control.

To reach maximum consensus on the design criteria listed above, the working group has developed recommendations for various reaches. The group recommends no additional setbacks of levees through urban reaches, with levee raise/floodwall height of three to four feet. In agricultural reaches the group suggests a maximum of 100-foot setback of levees, a levee raise/floodwall height not exceeding five feet, repair of existing levees to meet Army Corp standards, and no public access to levees (MIG 2001:7).

The Army Corps of Engineers has presented different flood control alternatives for the Pajaro River and its tributaries at stakeholder meetings (see Appendix C, Tables C.1 to C.6). Alternatives that have been determined by the working group to be most likely to

achieve stakeholder consensus involved hybrid options with a 100-year level of protection and a maximum setback of 100 feet. The combination of Alternative 2 and T4 was determined to be one of the best combinations for flood protection at the eighth stakeholder meeting, held in June 2003. Alternative 2 was the only alternative that did not involve a setback of 225 feet in any of the reaches. Alternative 2 would have an impact 358 acres of land, which was the smallest amount of land listed in the various alternatives. T4 is one of the flood control options that addresses flooding along Pajaro River tributaries. T4 is a hybrid option requiring with a maximum setback of 100 feet and provides the desired 100-year level of protection (Santa Cruz County 2003:17-21).

Stakeholders did agree on specific issues. From an economic standpoint, all stakeholders prefer a flood control project that will provide one hundred-year level of protection along sections of the Pajaro River and its tributaries that border homes and businesses. With a 100-year level of protection for these areas, the Federal Emergency Management Agency (FEMA) will not require homeowners and businesses to pay National Flood Insurance Program premiums (Santa Cruz County 2001:3,40).

However, if a feasible project cannot include a 100-year level of protection along all areas of the river and tributaries, stakeholders agree to reduce the level of protection in agricultural areas to a level below a 100-year. Agricultural businesses are not covered by the National Flood Insurance premiums, therefore FEMA standards are not as critical for agricultural land owners as they are for urban property owners (County of Santa Cruz 2002:40).

Procedures to Implement a Flood Control Project

Several processes are required for the project to move forward. Each process has a time line and involves stakeholder participation. By late 2002, the Army Corps of Engineers was scheduled to provide an evaluation of alternatives selected by the working group and other stakeholders. This evaluation involves several processes. The Army Corps must conduct a hydraulic analysis, providing detailed alignments, heights, and possible effects on the project caused by vegetation. The Army Corps must also analyze each alternative and provide a detailed cost estimate for each alternative. Additionally, the Army Corps must conduct a benefit-to-cost analysis to determine which alternative would provide the optimum protection given the project cost.

The Army Corps must also comply with environmental law. An environmental analysis must be included. In compliance with the Fish and Wildlife Coordination Act, the Corps will contract the United States Fish and Wildlife Service to determine the impact of each alternative on fish and wildlife, and prepare a biological assessment for the National Marine and Fisheries Service on the effect of a project on Steelhead located in the area (Santa Cruz County 2002:8-10). Environmental law would become one of the primary issues discussed at every stakeholder meeting.

Environmental Discourse

Individuals who banded together to protect the environment have gained a measure of political clout. In the quest to implement a new flood control project, environmental laws and environmental political discourse abound. The regulations stated in environmental discourse are the predominant determining factors in the design of the new project.

Environmentalists stress that environmental laws must be upheld. The constant reiteration of environmental law angers local stakeholders with economic concerns.

However annoyed these other stakeholders may be, environmental stakeholders are large in numbers and are supported by environmental agencies involved in the project. These agencies include the regulatory California Coastal Commission, the National Marine Fisheries Service and the Department of Fish and Game. Local agencies include the Santa Cruz Chapter of the Sierra Club and the Watsonville Wetlands Watch. Environmentalists from these agencies are adamant that the Army Corps of Engineers adhere to strict environmental codes. When questioned by local stakeholders over proposed land use models for the new project, members of the Army Corps have repeatedly stressed to these stakeholders that they must comply with section seven of the Endangered Species Act.

Section seven of the Act states that federal agencies involved with the implementation of a flood control project are not only to avoid impacting the habitat of listed species, but they must actively contribute to their conservation. On August 18, 1997 steelhead trout were added to the list of threatened species under the Endangered Species Act of 1973. By February of 2000, the National Marine Fisheries Service successfully declared the Pajaro River a habitat for populations of South Central California Coast (S-CCC) Evolutionarily Significant Unit (ESU) steelhead trout (National Marine Fisheries Service, Oct 24, 2001 p2). Regulations for the protection and conservation of S-CCC ESU steelhead trout, in accordance with section 4(d) of the Endangered Species Act went into effect on September 8, 2000.

Each environmental regulatory agency specifies regulations that must be taken into consideration when constructing the new flood control project. According to the National Marine Fisheries Service, studies have revealed that elevated water temperatures, sedimentation buildup, and the simplification of habitat have contributed to a decline in species like the steelhead trout in fresh water environments. To correct the problem, the National Marine Fisheries Service requests flood control measures that include restoration and enhancement of in-stream and riparian habitats (National Marine Fisheries Service 2002:2).

The Department of Fish and Game expressed similar environmental concerns regarding habitat degradation. The goal of the Department of Fish and Game is to re-establishing “viable biological communities” in the Pajaro River channel. The agency states that a shaded and buffered low flow channel would be necessary, along with “inputs of various types of woody material, dense clumps of mature riparian vegetation, and a significant number of mature riparian trees,” to restore the habitat (Santa Cruz County 2001:10).

Chapter three of the Coastal Conservancy Act of 1976 also requires preservation and enhancement of the Pajaro River system and surrounding agricultural lands. The California Coastal Commission retains jurisdiction over public trust lands including the Pajaro River, and has jurisdiction over the approval of the final flood control project. For this reason, section 31258 of the Coastal Conservancy Act requires that flood control measures proposed in the River Concept Plan be submitted to the California Coastal Commission for approval. The goals of the River Concept Plan were to identify and

explore feasible flood control options that would protect and enhance the habitat, riparian corridor, agricultural resources, and recreational activities (MIG 2001:2).

Preferred and Contested Land Use Models

The environmental discourse stated above has resulted in the creation of land use models that are preferable to one group of stakeholders and contested by almost everyone else. Disagreement over land use models is the primary reason stakeholders cannot reach a consensus regarding flood control procedures. Two highly controversial and publicly debated issues at stakeholder meetings are how much land must be taken to implement the flood control project, and how this land will be used. The California Coastal Commission's proposed model for flood control has led to the development of one of these issues.

California Coastal Commission bylaws state that any approvable flood control option must include public access provisions; prohibiting public access to the Pajaro River from any levee would conflict with the Coastal Act's mandate to maximize public access to California levee systems for recreational use (MIG 2001:1-5). This language has infuriated local stakeholders. One local stakeholder showed me a copy of the California Coastal Commission's publication, the California Coastal Access Guide. The guide includes information on the scenic and recreational facilities along the California coast. A nine-mile Pajaro River bike path is listed in the publication. The bike path begins at the intersection of Holohan Road and Highway 152 and extends to the mouth of the Pajaro River.

The problem is, this stakeholder explained, the bike path does not exist yet. The construction of a bike path along this section of river would automatically designate the type of flood control project to be implemented. A bike path requires construction of a levee. It

appears as though the California Coastal Commission already has plans for implementing a recreational-based project. If this is so, stakeholder meetings are just a ruse. Stakeholder input does not matter.

As previously stated, recreational levee use had been a problem for farmers. Farmers who own land along the Pajaro River were willing to agree to a 100-foot setback of reconstructed levees with floodwalls on their land, provided that recreational use of levees and set-back areas was not permitted. Farmers stated that such use would conflict with farming operations. If recreational uses were included in the new project, farmers would consider rescinding their offer (MIG 2001:77).

Land use and setback issues created dissention among stakeholders for other reasons as well. Environmentalists were asking for a 225-foot setback in agricultural and urban areas. Environmentalists proposed to use the land for nonstructural flood control (Orrell & Wilson, 1995). The use of vegetation in channel restoration techniques usually requires more space than hard engineering treatments involving the use of riprap, masonry walls, concrete walls, boulder walls, or junk car bodies and used car tires (Henderson 1986:549-558; Kondolf 1966:119-125).

This request angered farmers and other local stakeholders who would be affected by the setback. Farmers already agreed to give up 100 feet of land. Demanding 225 feet was deemed greedy and unnecessary. A Pajaro stakeholder commented that if environmentalists got their 225 feet, a section of homes along the Pajaro River would have to be demolished, along with several business structures. Other local stakeholders that would be affected by the loss of land sided with the farmers. "No one on the

Monterey County side of the Pajaro River wants more vegetation,” commented another Pajaro resident. “We want flood protection and we want a clear, deep channel that will guarantee the transport of sediment.”

The taking of additional land would also increase the expense of a project. At the seventh stakeholder meeting, a local stakeholder questioned, “We have to pay millions for the fish?” She wanted to know exactly how many fish were. The Army Corps of Engineers responded by saying that even if there were no fish, by law they still had to provide protection for the riparian habitat.

2003 Issues

Setback issues based on environmental needs were the most socially contested topics at stakeholder meetings until the meeting held in June 2003. A local stakeholder commented on the events that took place at the eighth stakeholder meeting. Those in attendance expected the Army Corps of Engineers to present the final alternative chosen for flood control. They were surprised that the Army Corps presented yet another round of alternatives, and informed them that there would be a ninth stakeholder meeting, held at a future date.

Local stakeholders have become less outspoken regarding flood control alternatives. Environmentalists have “quieted down.” Farmers are once again willing to allow the 100-foot setback to construct a floodwall or levee on their land, providing the new structure would be maintained. Like-minded individuals still meet in small groups to discuss flood control issues. The group Action Pajaro Valley has formed another group with a membership that is comprised of selected individuals, a subset of people joined by their

economic concerns and similar visions for the valley. Group issues and concerns are kept quiet. One local stakeholder describes an air of secrecy. He believes local stakeholders are not quite as outspoken about flood control issues because they are preoccupied with other issues.

One of these issues is a new economic concern. The economic downturn over the past few years has impacted the area. Many farmers, business owners, and residents are suffering from economic hardships due to the poor economy. An additional economic hardship will be placed on stakeholders who own property in the floodplain. During the spring of 2003, local residents discovered that the County of Santa Cruz is turning maintenance of the Pajaro River and its tributaries over to the State of California. Santa Cruz County officials state they must do this in order to keep from going bankrupt due to damages incurred because of the lawsuit. The County of Monterey proposed to do the same. Protests from Monterey County stakeholders have stalled the County of Monterey.

Maintenance provided by the Counties of Santa Cruz and Monterey costs \$550,000 per year. Maintenance provided by the State will cost approximately \$950,000 per year. A Pajaro stakeholder commented that, by law, the State of California has to honor the request of the Counties of Santa Cruz and Monterey, and provide channel maintenance for the area. When the two counties provided maintenance, residents from Zone 7 in Santa Cruz County and residents from Zones 1 and 1A in Monterey County were taxed to cover maintenance costs. These zones included area in the floodplain as well as outlying areas. The State of California is only allowed to tax residents who live in the floodplain for maintenance. This

is a much smaller segment of the local population, so fewer individuals will have to pay a larger sum for maintenance.

Additionally, hopes that the upper basin counties of Santa Clara and San Benito would contribute to maintenance of the Pajaro River faded. The State does not have the authority to force these counties to contribute funds for maintenance or for a flood control project downstream. At least for now, the threat of further economic hardship has quieted local stakeholders' conflicts over flood control issues.

Conclusion

In this chapter, the events of the late nineties were updated and opinions on flood control project alternatives were revised to reflect the language of political discourse and expressed in public forums. These opinions were based on environmental law and concerns over flood control issues that emerged after the social impact assessment study. Stakeholders were able to reach a consensus over the amount of desired protection a flood control project should provide, but not over the means to acquire the desired level of protection. The chapter also included how the nature and level of concern changed with the onset of the recession of the early 21st century. Economic and political events in the wider system have subdued the debate over flood control issues. In chapter six, I will present a final overview of the events surrounding flooding, flood control in the Pajaro region, and consider the implications. I will examine the various factors that contributed to stakeholder opinions regarding proper flood control procedures, and the resulting conflict these opinions created.

CHAPTER SIX

PLACE ATTACHMENT AND THE SOCIAL PRODUCTION OF SPACE

The goal of this study was to explore the factors that contributed to community conflict over the implementation of a flood control project along the Pajaro River and its tributaries, the Corralitos and Salsipuedes Creeks. The conflicts relate to the kinds of place attachment held by different stakeholders, conflicts that reveal underlying assumptions and emotions regarding place. In turn, the nature of the place attachment to the area influences personal or group preferences for the social production of the new flood control project.

This study also explored the social and environmental factors that led to the social construction of the Pajaro River levee system. The original levee system, constructed in 1949, serves an example of the social production of a physical setting. Construction of the levee system involved all the social, economic, ideological and technological factors that contribute to the physical construction of a built form.

For approximately 20 years before the flooding of 1995, the channel of the Pajaro River was not cleared. Stakeholders have contributed various theories as to why the levee was not maintained. The most popular theory held by residents is that the counties of Monterey and Santa Cruz did not want to pay for maintenance, although the wider context for economic constraints is rarely examined. Within this time span, the Pajaro River levee system transformed into the Pajaro River riparian habitat. For environmental stakeholders, the structure became a non-verbal medium for personal identity, morality and social standing within the community. The Pajaro River was transformed physically, through

biological development, and symbolically, through local stakeholders' social exchanges, memories and images of the Pajaro River riparian habitat.

Once again, the Pajaro River is about to become a representation of the social production of space. The Army Corps of Engineers will employ the latest technological advances when constructing the new project. Current social, economic and ideological factors will influence the physical construction of the new flood control project. The process has become cyclical. For environmentalists, stakeholder place attachment has played the dominant role in the social construction of the Pajaro River. Environmentalists, and only environmentalists view the river primarily as a riparian habitat that must be preserved. Other stakeholders do not agree. Their attachment to the area predisposes that they would view the area in primarily human-centered terms, focusing attention on farm, homes and businesses. Stakeholders whose attachment to the area is based on economics want to "preserve our own habitat."

Stakeholder meetings have facilitated the political discourse that is a natural consequence of conflict over the production of public space. Stakeholders are able to voice their opinions on the construction of the new flood control project in a public forum. Stakeholders use "concrete facts" in constructing their arguments, but shape interpretation around various ideologies. The dialogue at stakeholder meetings demonstrates how conflicts develop and even magnify as stakeholders with differing attachments to the area express their opinions.

The Effect of Place Attachment on Stakeholder Consensus

All stakeholders were linked to the area due to the loss and destruction caused by the March 1995 flood. Personal, economic, and environmental losses were the predominant factors in uniting these stakeholders. Because of the severity of the flood, every stakeholder I interviewed for this study believed that a flood control project was desperately needed. All stakeholders agreed that a project that offers a 100-year level of protection would be the most desirable. Stakeholders also concurred that Alternative 5 was unacceptable because it did not address flooding along the Pajaro River, and that a new flood control alternative must be explored. Although stakeholders agreed on these issues, they could not reach an agreement on how to implement a flood control project, a consensus that would require that they achieve accord on technical details that reflect the social uses of the land.

Stakeholder Conflict and Place Attachment

Stakeholder place attachment has divided most stakeholders into two groups, those whose primary concerns regarding the implementation of a flood control project are environmental, and those whose concerns over flood control issues are primarily economic. Stakeholders with environmental concerns are requesting as much land be allocated as possible for the project. They would like the Army Corps of Engineers to select a project that includes a setback of 225 feet in locations that would be desirable for a riparian habitat. The political clout environmentalists possess is buttressed by environmental laws and regulations. Environmental law is such an important factor in determining flood control measures that a project could not be completed without compliance to the law.

Throughout the process, the Army Corps of Engineers has been very concerned over compliance with section seven of the Endangered Species Act. The Army Corps included their mission statement in their power point presentation at the eighth stakeholder meeting. The statement read that the Army Corps' mission is to "Provide service to the Army and the Nation by designing, building, operating, maintaining, and permitting civil works projects that build the nation's long term economic might in an environmentally sustainable way" (Santa Cruz County, 2003:2). This mission statement reflects the political clout of environmentalism.

At the other end of the spectrum, stakeholders whose attachment to the area was based on ownership of land, a business, or residence had entirely different goals for the flood control project. They did not want the construction of a flood control project to impact more land than necessary. They want to see a flood control project implemented as soon as possible, before they suffered any more economic hardships due to flooding. These stakeholders blame environmental regulations for the lengthy delays in the implementation of the new project

A third group of individuals I interviewed, residents of a local migrant camp, did not consider themselves to be stakeholders. They were not attached to the area, not even economically. If flooding occurred, they said they would simply move to another area. Their primary concerns at the time were medical. Residents of this camp were frantic at the thought of losing medical treatment. They frequently suffered from rashes caused by pesticides, and from back pain and injuries. At the time I was conducting the social impact

assessment, the government was considering discontinuing medical aid for illegal immigrants.

Of all the individuals I interviewed, members of this group experienced the highest levels of poverty and described the most vivid details of distress. Residents of the camp cried as they recalled stories of economic hardship and extreme stress. One woman was so mentally distraught that she bundled up all her clothes, took them outside and burned them. She stretched out her arms so I could examine her wrists. Razor scars were visible on both wrists. She commented that shortly after the episode of burning her clothes, she had tried to commit suicide. While elites might cite them as a factor to be considered, they themselves appeared to have little input into the larger decision-making process over flood control. Instead they used the opportunity for “official input” to draw attention to their own concerns.

Organizational Involvement and Identity

Although this group of residents did not actively participate in the stakeholder process, an interest in the designing and implementation of a flood control project was expressed by most local stakeholders, and the list continued to grow. Local governing agencies were working with the Army Corps of Engineers from the onset of the project. These agencies were the County of Santa Cruz Public Works and Planning Departments, and County of Monterey Planning Department. These agencies shared a financial interest in the project and were also concerned with similar technological factors regarding construction of the project.

The list of stakeholders continued to expand as the sequence of events unfolded. After the flood of 1995, individuals who lived in the area and were active in their community were invited by the Army Corps of Engineers to participate in the flood control project. These stakeholders formed new social organizations, including Action Pajaro Valley and Together in Pajaro, to illicit help from local residents with similar interests.

Environmental regulatory agency participation in the flood control project was federally mandated. Members from the California Coastal Commission, the Department of Fish and Game, and the National Marine Fisheries Service were also involved in the project. Members of the local environmental groups, the Santa Cruz Chapter of the Sierra Club, and Watsonville Wetlands Watch joined in the mix.

Membership in one of these organizations allowed for the expression of individual identity and helped foster that identity. Through participation in these organizations, community members could belong to a group that voiced its opinion regarding the designing of the flood control project.

Organizational Effects on the Flood Control Project

Stakeholders from different groups represented different interests that were based on their attachment to the area. As Peggy stated, there were too many stakeholders involved in this decision-making process. Stakeholders could not reach a consensus over flood control measures because there were too many opinions, and these opinions clashed. While local stakeholders were arguing over vegetation and land acquisition, the Army Corps of Engineers was proceeding with designing various flood control

alternatives, alternatives that would be presented to the public at the next stakeholder meeting.

Peggy believed that, at this rate, nothing would be accomplished. The process of planning for a flood control project would become a vicious cycle. She commented that the Army Corps of Engineers would not force a flood control project on the public. If stakeholders cannot reach an agreement, stakeholder meetings will have been a waste of time. The Army Corps will spend their money on another project.

Mistrust began to develop between stakeholders. The problem with stakeholder meetings was that there was so much going on that nobody knew about. Members of special interest groups were holding separate meetings and attending focus groups between stakeholder sessions. The Counties of Santa Cruz and Monterey attended numerous meetings with the Army Corps of Engineers but did not inform other stakeholders. Members of the agricultural community held focus groups. Social organizations held separate meetings. Environmental regulatory agency policies were under special scrutiny. The California Coastal Commission's publication promoting a bike path along the Pajaro River levee only worsened suspicions.

Mistrust between the four counties was an additional problem. In 1996 Congress authorized the study for the Pajaro Valley basin, establishing federal involvement in flood control measures for the counties of Santa Cruz, Monterey, Santa Clara and San Benito (United States Congress 1999:1,2). Peggy remarked that nothing has been accomplished between these agencies because of the lack of trust. Mistrust developed, often attributed to the lack of communication between stakeholders. However, it was not the lack of

communication that created the mistrust, but the lack of connection regarding underlying assumptions. Groups talked to each other and that only amplified the divisions between them.

The lack of trust among stakeholders and the lengthy bureaucratic delays that have resulted in delaying construction of the new flood control project have strengthened stakeholder place attachment. Since the flood of 1995, place attachments have become more differentiated. Individual identities have become further embedded in group ideology as stakeholders continue to fight for the flood control project they deem necessary and appropriate for the area. Environmentalists have become even more tenacious in their fight for the restoration and further development of the riparian habitat. Stakeholders who contest environmental ideology are equally resolved to fight for a flood control project that will require the acquisition of less land and will protect the economic interests of the community. Strengthened place attachment has resulted in increased tenacity and an even wider ideological gap between stakeholders.

Communication and Compromise

Many local stakeholders simply wanted to see a solution to flooding. Stakeholders who preferred a middle ground, a give and take approach, believed that there must be concession from individuals on both sides of the heated debate over flood control. If one group of stakeholders would make a small concession and ease up on their criteria for flood control measures, perhaps another group would do so as well.

Stakeholders agreed the desirable solution would be a compromise between the Department of Fish and Game, local governmental agencies and the Army Corps of

Engineers. Congressman Farr stated, “Combining flood protection with habitat restoration indicates a move toward more comprehensive solutions to the problem of flooding” (United States Congress 1999:1).

Stakeholders who prefer a compromise believe that current lack of maintenance along the Pajaro River may be problematic because the County of Santa Cruz is in the middle of a conflict between environmentalists and farmers. Environmentalists threaten to sue the County if too much vegetation is removed from the river, and farmers threaten to sue the County if too much vegetation is left in the river. This debate results in a stalemate and no channel maintenance. The irony is that both groups will sue the county if flooding occurs again in the region.

Implications for Mediation

Stakeholders’ place attachment has resulted in feelings and beliefs that are immovable. Because attachment to place varies from individual to individual, opinions regarding flood control issued varied, often extremely. Place attachment provides an analytical tool for researchers in applied sciences to understand why conflict occurs, and to understand that mediation may not resolve these conflicts. Stakeholder consensus may never be achieved, unless outside factors force a change. Economic or personal crises may be the only impetus for change. Another severe flood would affect stakeholders personally and economically, and might unite stakeholders and foster a quick implementation of the new project.

However, old obstacles remain and new constraints are forming. The fact that the County of Santa Cruz is turning over channel maintenance to the State of California has

already subdued local stakeholders, who cannot predict how this shift in responsibilities will play out. Potentially, the economic burden on particular stakeholders will increase, amplifying both their sense that economics is the primary concern and that the situation is inherently unfair. The larger political context of the environmental movement is in flux; will new policies be evident in federal agencies as political winds shift? Will environmentalists be even more adamant?

My initial role in the project was a relatively minor one. The Army Corps was aware that social cooperation was essential and viewed a contract to conduct a social impact assessment as a visible means of communicating that “social input matters.” In the years that followed it has only been more evident that social divisions have created an impasse. Understanding the nature of those social divisions, in this case and in many like it, is more critical than ever. However, it is often difficult to discern the underlying principles that eventually sort people out into opposing camps. Any attempt at mediation that holds that communication in and of itself is sufficient, is doomed to failure. As is seen in the case of the Pajaro stakeholders, talk may only provide a venue for making differences more visible.

I have found it useful to consider how the social production of space, reflecting what people emphasize in their understanding of place, reveals underlying assumptions and values. Emphasizing environmental or economic values in turn influences people’s models of causation, and their consequent proposals for action. They are locked in a battle, each party viewing itself as morally superior, pragmatic and reasonable, and casting the other as a ridiculous obstacle. I suggest that this study, which began as a

mere social impact assessment, was greatly benefited by applying theorizing place attachment. I can only suggest that mediators, stakeholders in local, state and federal agencies, might find it useful to understand the foundation of the conflict and seek ways to shake the gridlock. I can certainly suggest that other applied social scientists use place attachment to help reveal underlying values and assumptions in other real world conflicts.

REFERENCES

Action Pajaro Valley

1998 Festival Summary. Electronic Document,
http://www.actionpajarovalley.org/docs/festivsum/festsumdoc_eng.html, accessed
April 22, 2002.

Allon, Fiona

2002 Translated Spaces/Translated Identities: the Production of Place, Culture and
Memory in an Australian Suburb. Electronic Document,
<http://webmail.att.net/wmc/v/wm?cmd=Show&no=31&uid=1344&sid=c0>, accessed
October 03, 2002.

Altman, Irwin, and Setha M. Low

1992 Preface. *In Place Attachment*. Irwin Altman and Setha Low, eds. P. xi. New
York: Plenum Press.

Altman, Irwin and Setha M. Low

1992 Place Attachment: A Conceptual Inquiry. *In Place Attachment*. Irwin Altman and
Setha M. Low, eds. Pp. 4-5,165. New York: Plenum Press.

Alvarado, E.

1995 Channel Work Stalled on Pajaro River. *Watsonville Register-Pajaronian*,
March 7: 1,4.

Bernard, Russell H.

1994 *Research Methods in Anthropology*. Thousand Oaks: Sage Publications, Inc.

Brinson, D.

1995 Pajaro Residents Homeless For 4 Days: Repairs Begin on Broken Levees.
Watsonville Register-Pajaronian, March 15:1, 2.

Brown, Barbara B., and Douglas D. Perkins

1992 Disruptions in Place Attachment. *In Place Attachment*. Irwin Altman and Setha
M. Low eds. Pp. 279-307. New York: Plenum Press.

California Department of Finance

1997 Population Research Unit, California Cities, Towns, & Counties. Technical
Report. Sacramento: California Department of Finance.

Childress, H.

1996 Place Attachment. *The Journal of Architectural and Planning Research* 13(4):339-344. Quoted in Mary A Corcoran 2002 Place Attachment and Community Sentiment in Marginalized Neighborhoods: A European Case Study. *Canadian Journal of Urban Research* 11(1):50.

Corcoran, Mary P.

2002 Place Attachment and Community Sentiment in Marginalized Neighborhoods: A European Case Study. *Canadian Journal of Urban Research* 11(1):48-68.

Freedman, A.

1997a Costly Winter Flooding Soaks Species Act in Controversy. *Congressional Quarterly Weekly Report* 55:698-700.

1997b Effort To Ease Restrictions of Species Act Rejected. *Congressional Quarterly Weekly Report* 55:1069.

Gibbs, N.

1995 Swept Away. *Time*, March 27:34-35.

Gottdiener, Mark.

1994 *The Social Production of Urban Space*. Austin: University of Texas Press.

Henderson, J. E.

1986 Environmental Designs for Streambank Protection Projects. *Water Resources Bulletin* 22(4):549-558.

Hummon, David M.

1992 Community Attachment: Local Sentiment and Sense of Place. In Irwin Altman and Setha M. Low, eds. Pp. 253-277. New York: Plenum Press.

Hunter, A.

1974 *Symbolic Communities*. Chicago: University of Chicago Press. Quoted in Setha M. Low 1992 *Symbolic Ties that Bind: Place Attachment in the Plaza*. In Place Attachment, Irwin Altman and Setha Low, eds. New York: Plenum Press.

Kondolf, G. M.

1996 A Cross Section of Stream Channel Restoration. *Journal of Soil and Water Conservation* 51(2):119-125.

Low, Setha M.

1996 Spacializing Culture: the Social Production and Social Construction of Public Space in Costa Rica. *American Ethnologist* 23(4):860-869.

Low, Setha M.

1992 Symbolic Ties That Bind: Place Attachment In The Plaza. *In* Irwin Altman and Setha Low, eds. Pp.165-185. New York: Plenum Press.

Madsen, Richard

1992 Contentless Consensus: The Political Discourse of a Segmented Society. *In* America at Century's End. Alan Wolfe, ed. Pp.440-460. Berkeley: University of California Press.

Mesch, Gustavo S., and Orit Manor

1998 Social Ties, Environmental Perception and Local Attachment. *Environment and Behavior* 30(4):506.

MIG

2001 Pajaro Flood Protection Project Status Report. Electronic Document, <http://www.pajaroriver.com/Reportspage.htm>

Monterey County Redevelopment Agency

1990 Affordable Housing Plan for the Pajaro Redevelopment Project Area. Population Characteristics - 1990 Census. Technical Report. Pajaro, CA: Monterey County Office of Housing and Redevelopment.

Monterey County Water Resources Agency

1998 Pajaro River Flood Control Meeting: Demystification of the U.S. Army Corps of Engineers Process for Flood Control. Technical Report Salinas, CA: Monterey County Water Resources Agency.

Orrell, K., and P. Wilson,

1995 Managing River Environments: The Way Forward. *Geographical Magazine*, June 67:53-55.

Raider, F.

1995a Officials Say Flooding Inevitable. *Watsonville Register-Pajaronian*, March 16: 1.

1995b Public Officials Face Ire of Flood Evacuees. *Watsonville Register-Pajaronian*, March 18:1, 7.

1995c Pledge on Pajaro River. *Watsonville Register-Pajaronian*, March 21:1, 7.

1995d River Cleanup 'Hasty'. *Watsonville Register-Pajaronian*, March 27:1, 8.

Richardson, M.

1982 Being-In-The-Market Versus Being-In-The-Plaza. *American Ethnologist* 9:421-436. Quoted in Setha M. Low 1992 *Symbolic Ties that Bind: Place Attachment in the Plaza*. New York: Plenum Press.

Riley, R.

1992 Attachment to the Ordinary Landscape. *In Place Attachment*. Irwin Altman and Setha M. Low, eds. Pp. 13-55. Quoted in Mary P. Corcoran 2002 *Place Attachment and Community Sentiment in Marginalized Neighborhoods: A European Case Study*. *Canadian Journal of Urban Research* 11(1):47-68.

Santa Cruz County

2001 Pajaro River Flood Protection Community Planning Process: Stakeholder Meeting # 6. Technical Report. Santa Cruz, CA: Santa Cruz County.

Santa Cruz County

2002 Pajaro River and Salsipuedes/Corralitos Creeks Management and Restoration Plan EIR CEQA findings. Electronic Document, <http://pajaroriver.com/Reportspage.htm>

Santa Cruz County

2003 Pajaro River Flood Protection Community Planning Process: Stakeholder Meeting # 8. Electric Document, <http://www.pajaroriver.com/Ppresentations.htm>

Schilling, E.

1995 Rising River Forces Thousands From Homes. *Watsonville Register-Pajaronian*, March 10:1, 3.

Shumaker, S.A., and J. Hankin

1984 The Bonds Between People and their Residential Environments: Theory and Research. *Population and Environment* 7:59,60. Quoted in David M. Hummon 1992 *Community Attachment: Local Sentiment and Sense of Place*. *In Place Attachment*. Irwin Altman and Setha M. Low, eds. Pp. 253-276. New York: Plenum Press.

Stinson, T. F.

1996 New Agricultural Policy Emerges From 1993 Flood. *Forum for Applied Research and Public Policy* 11(3):117-121.

United States Army Corps of Engineers

1994 Pajaro River at Watsonville, California Flood-Control Reconnaissance Study. Environmental Assessment. Washington DC: U.S. Government Printing Office.

United States Army Corps of Engineers

1996 Pajaro River General Re-evaluation Report. Overview, Document for F3 Milestone. Washington DC: U.S. Government Printing Office.

United States Army Corps of Engineers

1997a Pajaro River and Tributaries Flood Control Study at Watsonville, California: Social Environment Impact Study, General Re-evaluation Report. Washington DC: U.S. Government Printing Office.

1997b Pajaro River and Tributaries Flood Control Study At Watsonville, California: Social Impact Assessment Study. Washington DC: U.S. Government Printing Office.

United States Congress

1999 Farr Delivers \$9.8 Million for District Water Projects. Electronic document, <http://www.house.gov/farr/press/prewapp.htm>, accessed April 24, 2002.

United States Census Bureau

1990 City of Watsonville Statistical Summary: Compiled from 1990 U.S. Data. Technical Report. Washington DC: U.S. Government Printing Office.

United States Fish and Wildlife Service

1998 Endangered Species Act of 1973. Electronic document, <http://endangered.fws.gov/esa.html>, accessed March 3, 1998.

Wallace, L.

1995a Pajaro Study Ordered: Cleanup Must Wait. Watsonville Register-Pajaronian, March 8:1, 7.

1995b Board Rejects Halt to River Cleanup. Watsonville Register-Pajaronian, March 24:1, 7.

1995c Channel Clearing Begins. Watsonville Register-Pajaronian, March 27:1, 8.

Weisman, J.

1996 Water Bill Advances, Faces Fight in Full Committee. Congressional Quarterly Weekly Report, 54(24):1671-1672.

APPENDIX A

LIST OF STAKEHOLDERS

**Business Representatives With
Interests in the Floodplain**

Young's Tire Service
Monterey County

Sambraillo Greenhouses
Monterey County

Pacific Gold Farms
Santa Cruz County

Ed Kelley Farms
Santa Cruz County

Local Environmental Groups

Elkhorn Slough Reserve
Monterey County

Watsonville Wetlands Watch
Santa Cruz County

Sierra Club
Santa Cruz County

Community Groups

Casa de la Cultura, St. Vincent de Paul
Pajaro Valley – Monterey County

Together in Pajaro
Parjaro Valley – Monterey County

Community Alliance for Family Farms
Parjaro Valley – Santa Cruz County

Action Pajaro Valley
Monterey and Santa Cruz Counties

Farm Bureau
Monterey and Santa Cruz Counties

Government Stakeholders

Regulatory Agencies

Tami Grove
California Coastal Commission

Patricia Anderson
State CA Dept. Fish & Game

Amelia Orton-Palmer
U.S. Fish & Wildlife Service

Joyce Ambrosius
National Marine Fisheries Service

Holly Price
Monterey Bay National Marine
Sanctuary

Bill Arkfeld
Regional Water Quality Control Board

Don Steiger
Cal Trans

Monterey County – CAO

Bill Phillips
Deputy CAO

*Monterey County –
Water Resources Agency*

Curtis Weeks
General Manager

Joe Madruga
Chief Engineer

Monterey County Planning Department

Scott Hennessey
Director

Santa Cruz County – CAO
Susan Mauriello
CAO

Santa Cruz County – Public Works Department

Tom Bolich
Director

Peter Cota-Robles
Pajoro River Project Director

Santa Cruz County – Planning Department

Ken Hart
Environmental Coordinator

U.S. Army Corps of Engineers

Colonel Timothy S. O'Rourke
District Engineer
U.S. Army Corps of Engineers

Elected Representatives

U.S. Congress

Sam Farr
U.S. Congress Member, 17th District
Alternate: Alec Arago

CA State Senate

Bruce McPherson
CA State Senator
15th District
Alternate: Albert Berger

CA State Assembly

Fred Keeley
CA State Assembly Member
27th District
Speaker Pro Tempore
Alternate: Reed Addis

Simon Salinas
CA State Assembly Member
28th District
Alternate: Gonzalo Coronado,
Sandra Oliverez

Monterey County Board of Supervisors

Lou Calcagno
Monterey County Supervisor
3rd District
Alternate: Fred Kennedy,
Tischa Hutchins

Santa Cruz County Board of Supervisors

Tony Campos
Santa Cruz County Supervisor
4th District, Chairman
Alternate: Jenny Sarmiento

Ellen Pirie
Santa Cruz County Supervisor
2nd District
Alternate: Stephanie Camacho

City of Watsonville

Chuck Carter
Watsonville City Council Member,
District 3, Mayor

Staff Working Group

Consultants – Meeting Facilitation

Dave Dickson
Project Manager

Tim Gilbert
Meeting Facilitator
Moore, Iacofano, & Goltsman, Inc

Bonnie Campbell
Project Associate
Moore, Iacofano, & Goltsman, Inc

Consultants – Biology

Rick Swift
Project Manager
CH2MHill Inc.

Mary Miles
Biologist
CH2MHill Inc

*Consultants –
Hydrologic Engineering*

Ken Myers
Project Manager
HDR Engineering Inc.

Ed Wallace
Principal in Charge
Northwest Hydraulic Consultants Inc.

Loren Murray
Project Manager
Northwest Hydraulic
Consultants Inc.

Walter Yep
Principal in Charge
Army Corps' Consultants

Ada Squires
Head Planner
Army Corp's Consultants

Monterey County – CAO

Bill Phillips
Deputy CAO

*Monterey County – Water
Resources Agency*

Curtis Weeks
General Manager

Joe Madruga
Chief Engineer

*Monterey County – Planning
Department*

Scott Hennessey
Director

Santa Cruz County – CAO

Susan Mauriello
CAO

*Santa Cruz County -
Public Works Department*

Tom Bolich
Director

Peter Cota-Robles
Pajaro River Project Director

*Santa Cruz County-
Planning Department*

Ken Hart
Environmental Coordinator

*City of Watsonville –
Dept. Public Works & Utilities*

David Koch
Director

Steve Palmisano
Env. Projects Manager

U.S. Army Corps of Engineers

Arijs Rakstins
Project Management Chief

Eric Bluhm
Project Manager

Tom Kendall
Planning Branch Chief

Jim Howells Jr.
Plan Formulation Section Chief

Linda Ngim
Environmental Planner

Federal Oversight:

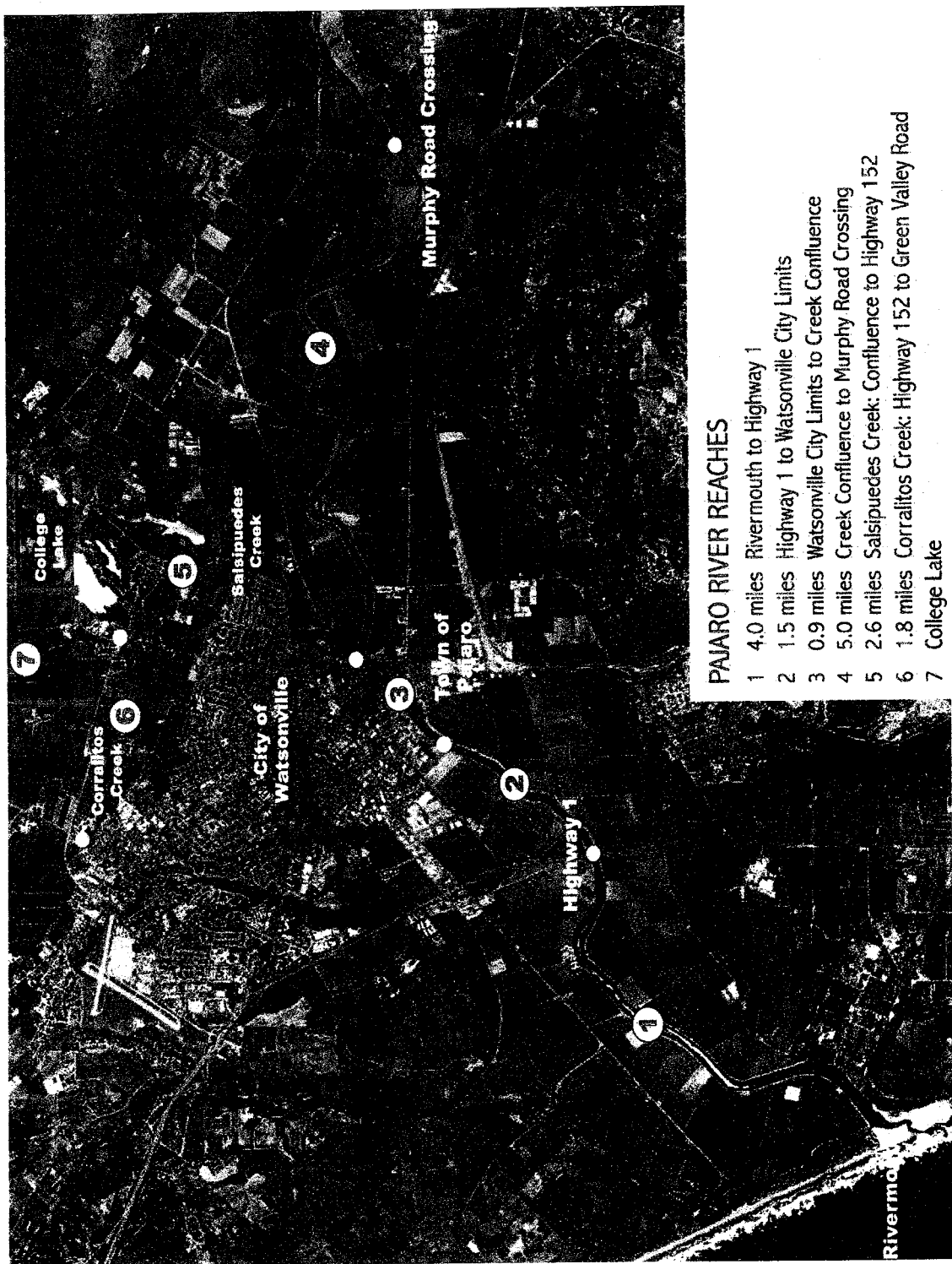
Alec Arago
Office of Congress Member Sam Farr

Public Process Funding:

Patsy Heasley
Project Manager
CA State Coastal Conservancy

Source: Santa Cruz County, 2001, Pajaro River
Flood Protection Community Planning Process.
Technical Report.

APPENDIX B



Map and Data Provided by MIG, 2001

APPENDIX C

FLOOD CONTROL ALTERNATIVES

Table C.1
Alternative Features Comparison

Alternative	Levee Height in Feet (Reach 3)	Setback in Feet	Level of Protection
Alt 1 4' Raise in Place	10 (+4)	None	30 years
Alt 1A 9' Raise in Place	15 (+9)	None	100 years
Alt 2 100' Setback	11 (+5)	100	50 Years
Alt 2A 100' Setback	10 (+4)	100	100 years
Alt 2B 100' Setback	12 (+6)	100	100 years
Alt 3 225/100' Setback	10 (+4)	225/100	100 years

Table C.2
Flood Protection Concepts for the Creeks: Concepts Evaluated for Hydraulic Proficiency

Concepts	Description	Level of Protection
T1	Raise in place	50 year
T2	Setback	Removed from consideration Sept 12
T3	Hybrid with maximum 225' setback	100 year
T4	Hybrid with maximum 100' setback	100 year

Table C.3
Features of Alternatives

Alternative	Reach 1	Reach 2	Reach 3	Reach 4
1A 9' Levee Raise in Place	Levee No setbacks Height: 15' (+9) Veg: n=0.03 - 0.1	Levee No setbacks Height: 16' (+9) Veg: n=0.04	Levee No setbacks Height: 15' (+9) Veg: n=0.04	Levee No setbacks Height: 16' (+8) Veg: n=0.04
2A 100' Setback	Levee 100' setbacks Height: 11' (+5) Veg: n=0.03 - 0.1	Levee 100' setbacks Height: 12' (+5) Veg: n=0.04	Levee No setbacks Height: 10' (+4) Veg: n=0.04	Levee 100' setbacks Height: 13' (+5) Veg: n=0.04 - 0.075
3 225/100' Setback	Levee 100' setbacks Height: 12' (+6) Veg: n=0.03 - 0.1	Levee 225' setbacks Height: 12' (+5) Veg: n=0.04 - 0.06	Levee No Setbacks Height: 10' (+4) Veg: n=0.04 - 0.06	Levee 100' setbacks Height: 13' (+5) Veg: n=0.04 - 0.075

Table C.4
Economic/Financial Feasibility Comparison (Preliminary Estimates in Millions):
Mainstream Alternatives

	Alt 1A Levee	Alt 2A 100' Setback	Alt 3 225/100' Setback
Total Project Cost	\$261.2	\$176.4	\$179.4
Total Annual Cost	\$19.9	\$13.2	\$13.2
Benefits	\$14.8	\$14.9	\$14.8
Net Benefits	-\$5.1	\$1.7	\$1.6
Benefit:Cost Ratio	0.74:1	1.13:1	1.12:1
Non-Federal Cost (25%)	---	\$44.1	\$44.9
LOP	100 years	100 years	100 years

Table C.5
Economic/Financial Feasibility Comparison (Preliminary Estimates in Millions): All
Tributary Alternatives

	T1 Raise in Place	T3 Hybrid (Max 225' Setback)	T4 Hybrid (Max 100' Setback)
Total Project Cost	\$36.6	\$38.9	\$41.3
Total Annual Cost	\$2.7	\$2.9	\$3.1
Benefits	\$25.4	\$26.2	\$26.2
Net Benefits	\$22.7	\$23.3	\$23.1
Benefit:Cost Ratio	9.3:1	9.1:1	8.5:1
Non-Federal Cost (25%)	\$9.2 (25%)	\$13.9 (36%)	\$13.8 (33%)
LOP	50 years	100 years	100 years

Table C.6
Combinations with Best Potential: Preliminary Estimates (Dollar Amounts in Millions)

	Alt 2A & T4	Alt 3 & T3	Alt 2A & T3	Alt 3 & T4
Setbacks	100	225	100 (MS) 225	225 (MS) 100 (T)
Total Project	\$217.7	\$218.3	\$215.3	\$220.7
Net Benefits	\$24.8	\$24.9	\$25.0	\$24.7
Non-Federal	\$57.9	\$58.8	\$58.0	\$58.7
LOP	100 yrs	100 yrs	100 yrs	100 yrs
Land Impacted	358 acres	405 acres	365 acres	398 acres

Source: Data from Santa Cruz County, 2003, U.S. Army Corps of Engineers Stakeholder Meeting #8.
 Electronic Document: <http://www.pajaroriver.com/Reportspage.html>