DELTA VISION: RIDING THE CREST OF BIG IDEAS

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DELTA VISION: RIDING THE CREST OF BIG IDEAS

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Abstract

of

DELTA VISION: RIDING THE CREST OF BIG IDEAS

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Maria Slawson Wong

The Sacramento-San Joaquin Rivers Delta is in crisis. The prevailing viewpoint is simple: the Delta will collapse politically, structurally, and environmentally unless California identifies and implements bold changes. In 2006, Governor Schwarzenegger convened Delta Vision and invited interested stakeholders to share in the creation of a sustainable Delta vision.

I use qualitative and quantitative analysis to code stakeholder testimonies obtained from the Delta Vision website. Testimonies identified a range of issues that are crucial to restore and maintain the Delta and its water supply. I use descriptive statistics to identify which issues are most important to each stakeholder interest group. I then used bivariate correlation to analyze relationships between twelve variables associated with Delta issues.

Stakeholder participation in the Delta Vision process was lower than expected in a process this significant. Three stakeholder groups—water, local government, and experts—submitted the majority of testimonies. Stakeholders in this study identified inadequate conveyance and storage facilities, and flood threats as the most important and water conservation as the least important issue facing the Delta.

_____, Committee Chair
William D. Leach, Ph.D.

_____
Date

DEDICATION

To the faculty in the MPPA program, past and current: you are the best.

I especially thank Peter Detwiler, Mary Kirlin, and Bill Leach

for helping me cross the finish line.

Finally, to my family: I could not have done this without you.

TABLE OF CONTENTS

Page

Dedication vi

List of Tables ix

List of Figures x

Chapter

1. INTRODUCTION 1

Purpose 1

Brief History of California's Water Conflict: Why Water Matters 2

The State Water Project 4

Peripheral Canal 4

Role of the CALFED Bay-Delta Program 6

Role of the Courts 7

Delta Vision Case Study 8

Organization of the Remainder of the Study 10

Summary 11

2. LITERATURE REVIEW 12

Theoretical Framework 13

The Multiple Streams Theory 14

The Institutional Rational Choice Theory 15

The Punctuated Equilibrium Theory 17

Elements of Analysis 18

Policy Entrepreneurs 18

Agenda setting 21

Contingent Factors 23

Focusing Events 23

Problem Ambiguity 25

Framing 26

Venues of Policy Action 27

Issue Salience 28

Policy Image 29
Summary 30
3. METHODOLOGY 31
Research Approach 31
Study Sample 31
Collection and Tabulation of Data 32
Data Collection Process 34
Unit of Analysis 35
Study Validity 36
Data Analysis 37
Summary 39
4. DATA ANALYSIS, RESULTS, AND DISCUSSION 40
Descriptive Statistics 41
Bivariate Correlations 43
Means Comparison 45
5. CONCLUSIONS AND RECOMMENDATIONS 47
Overview 48
Study Limitations 48
Discussion 49
Utility of Theoretical Frameworks to the Study 50
Explanatory Elements and Contingent Factors 52
Explanatory Elements 52
Contingent Factors 52
Suggestions for Future Research 54
Policy Implications 54
Appendix A. Study Code Form 55
Appendix B. Coding Guidelines 58
References 60

LIST OF TABLES

Page

1. Table 3.1 Code Form Framework for Content Analysis..... 34
2. Table 3.2 Recoded Aggregated Variables..... 38
3. Table 3.3 Stakeholder Affiliation Percent of Total 39
4. Table 4.1 Descriptive Statistics 42
5. Table 4.2 Pearson's Bivariate Correlations Among Variables..... 46
6. Table 4.3 Comparison of Means: Issues and Stakeholder Affiliation 47

LIST OF FIGURES

Page

Figure 1 Timing and Number of Testimonies.....41

Chapter 1

INTRODUCTION

Purpose

Delta Vision is a bold attempt to resolve a series of longstanding and seemingly intractable problems inherent in a complex, dynamic physical system. The political, scientific, and institutional context of the Delta is equally treacherous due to numerous potential points of resistance and political obstacles. Moreover, concurrent policy processes such as the Bay Delta Conservation Plan, the beleaguered CALFED Bay-Delta Program, and the contested biological opinions for several endangered fish species further complicate decision-making. Delta Vision has moved forward despite these challenges and, for better or worse, is accomplishing the goals outlined in Governor Schwarzenegger's Executive Order S-17-06. Although this study focuses on Delta Vision stakeholders, I find the scope of the policy shift—from CALFED's collaborative culture to Delta Vision's top down approach to problem solving—reason enough to study the process.

I undertook this study to determine what issues are important to stakeholders in Delta Vision, a state level planning process. The study differs from conventional applications of policy process theories that focus on the national or supranational level. The Delta Vision process provides a unique research environment: archival protocols tracked and preserved the evolution of the Delta Vision document as it changed over the course of the two-year planning effort. Preservation of incremental changes to the Delta

Vision document, along with stakeholder comments and testimony, allow for a different analytical approach than the traditional end-point normally analyzed in policy research. This finer scale filter may lead to better understanding of how, when, why, and with what effect Delta Vision stakeholders, acting as policy entrepreneurs and advocates, had on outcomes within their sphere of influence (Bakir, 2009).

Using relevant elements of the Multiple Streams, Institutional Rational Choice, and Punctuated Equilibrium policy process theories, I explore how well the final Delta Vision Report's Twelve Policy Recommendations meet the needs and interests of Delta stakeholders. I begin by establishing two important research sideboards. First, I demonstrate that Governor Schwarzenegger engaged in formal agenda setting by defining the Delta Vision outcomes in the context of parameters outlined in Executive Order S-17-06. Second, for the purpose of this study, I hold that CALFED contributed to problem ambiguity, a condition necessary to the Kingdon model (Zahariadis, 1995). I then apply relevant elements of the Multiple Streams, Institutional Rational Choice, and Punctuated Equilibrium theories to explore how informal agenda setting, temporal sorting, entrepreneurial influences, and framing informed what Delta Vision stakeholders care most about.

Brief History of California's Water Conflict: Why Water Matters

> "The history of California in the twentieth century is the story of a state inventing itself with water"
>
> − William L. Kahrl, *Water and Power: The Conflict over Los Angeles Water Supply in the Owens Valley*

Scholarly investigations into the Delta Vision process are most informative when viewed through a historical lens. Water has been a source of conflict in this country since European expansion drifted west of the Mississippi River. Settlers who came to California in search of gold often found that the real riches were in the region's fertile soils and that water was the most limiting factor in deciding how to use land. Water rights law is complex west of the Mississippi River and, as Bencala & Dabelko (2008) explain, tensions between competing water uses such as land use, agriculture, energy, industry, municipal and household use, and ecosystem services drive the need to gain ever-increasing control of the resource. California has struggled with water delivery issues through three centuries; consequently, the doctrines of area of origin and beneficial use have become solidly embedded in the state's policy and legal structure.

The Owens Valley figures prominently in California's water history because the state's water wars effectively started with the battle over the Los Angeles Aqueduct. Water has always been a major limiting factor in the growth of California's cities (Reisner, 1993). Activists, historians, and researchers have documented the devastating consequences to Owens Valley from water diversions to Los Angeles in the first decades of the twentieth century. By 1924, Owens Valley's farmers and ranchers, frustrated and armed, rebelled against the powerful water coalition led by William Mulholland, Superintendent of the Los Angeles Department of Water and Power. Unfortunately by then Los Angeles had quietly purchased rights to ninety percent of the water in the Valley, the landowners were legally powerless, and for all intents, agriculture there was effectively dead.

The State Water Project

> "There it is. Take it"
>
> – William Mulholland, on watching water flow into a San Fernando Valley reservoir at a ceremony marking the completion of the Los Angeles Aqueduct, November 5, 1913

The State Water Project dates back to the early 1950s when the California Division of Water Resources (predecessor to the Department of Water Resources) received the first of several annual legislative appropriations to study the project's feasibility. In 1959, the California Legislature passed the Delta Protection Act and, at the urging of Governor Edmund G. Brown, also passed enabling legislation "putting the state in the water business" by authorizing the sale of general obligation bonds to build the State Water Project (Price, 1965, p. 291). The following year the voters, split along the north-south divide, approved the necessary funding. These actions, preceded by the dredging of key rivers of the Delta pursuant to the Central Valley Project (authorized by Congress in 1933) and completion of the Contra Costa Canal (the first unit of the Central Valley Project in 1940) incubated a long and bitter fight over California water.

Peripheral Canal

Constructing a peripheral canal around the Delta has been a contentious idea since first proposed in 1964. The Interagency Delta Committee, an ad hoc advisory committee for DWR formed to "resolve conflicts of goals and standards and to arrive at agreement as to mutually acceptable works and operations" in the Delta, formally proposed the concept in its *Plan of Development, Sacrament-San Joaquin Delta*. Ten years later, two significant events took place: the California Aqueduct to Southern California is

completed and the Delta Environmental Advisory Committee issued a recommendation that a “properly designed and operated” Peripheral Canal was necessary to protect the Delta. In 1980, the Legislature again asserted its power by specifying the Peripheral Canal as the preferred Delta water-transfer facility, equipped with fish-screens. However, the voters, motivated by a well run campaign opposed to the project, defeat Proposition 9 in 1982 (including the Peripheral Canal, the package of statewide water facilities, and Delta protection) by a 3-2 margin.

Water exports continued to expand in response to rapid urban and agricultural growth. In 1982, the California Supreme Court rendered the Racanelli decision, which among other things, strengthened the State Water Quality Control Board’s authority over water rights and quality, most notably conferring jurisdiction over the federal Central Valley Project. By 1990, California’s population was 29.8 million (1990, U.S. Census) and pumping increased again. In an attempt to address growing concerns about the Delta, the Legislature passed the 1992 Delta Protection Act and charged the Delta Protection Commission with completing a long-term resources management plan for the Delta by mid 1994. In 1992, Congress authorized the transfer of water rights from Central Valley Project contractors to other users and Governor Pete Wilson established the Bay-Delta Oversight Committee to undertake long term Delta planning. In 1993, the U.S. Fish and Wildlife Service listed the Delta smelt as threatened under the Endangered Species Act.

In 2000, the California Department of Fish and Game reported the decline of Delta sport fish, including salmon, at the same time that Southern California lost more than fifteen percent of its Colorado River water rights. Shortly thereafter, farmers and

urban users began to look to the Delta system for additional water. In 2005, the devastating effects of hurricanes Rita and Katrina highlighted the fragile condition of the Delta's aging levee systems.

Role of the CALFED Bay-Delta Program

CALFED emerged out of water conflicts resulting from the effects of a six-year drought and a simultaneous collapse of two fish species endemic to the Delta – Delta smelt and winter-run Chinook salmon. The crisis brought together three key Delta interest groups - agriculture, urban users, and environmentalists - who had been reluctant to work together on Delta problems. At the same time, "Club Fed," consisting of the Environmental Protection Agency, Bureau of Reclamation, National Marine Fisheries Service, and Fish and Wildlife Service, began to collaborate on Delta issues.

In 1994, Governor Pete Wilson and Interior Secretary Bruce Babbitt jointly announced the formation of CALFED; it would be six years before Congress appropriated funding. Critics have judged CALFED harshly over the years. Critics argue that the program was a massive failure, with little success in the policy, scientific, or legal arenas. The CALFED 2000 Record of Decision set out the program's primary objectives; however, CALFED's decentralized governance structure left implementation up to its twenty-four individual agencies. In the words of Booher & Inness (2010 forthcoming), "these agencies largely operated independent of one another, setting their own priorities and acting on them."

The fragmented structure of CALFED made it difficult to measure progress, leading many to speculate that the Delta's problems were too complex for even CALFED

to solve. An independent CALFED review convened in 2005 by Governor Schwarzenegger disagreed, refocused and revitalized the effort. Backed by a Little Hoover Commission report and a 10-year Action Plan, CALFED established a Strategic Planning Division.

Role of the Courts

On the evening of August 31, 2007, the extent of the Delta's vulnerability crystallized when U.S. District Judge Oliver Wanger shined a legal spotlight on the endangered Delta smelt. Environmentalists argued that huge pumps used by the State Water Project and the federal Central Valley Project trap and kill large numbers of the fish, pushing the species closer to extinction. However, this conveyance infrastructure pumps Delta water to parts of the San Francisco Bay Area, the San Joaquin Valley, and Southern California, and enabled much of the urban growth and agriculture that taxed the water delivery system. The system currently provides drinking water for twenty-five million Californians and irrigation for 750,000 acres of cropland. In response to Judge Wanger's ruling, agriculture and urban water users countered that these water facilities are crucial to keeping water flowing in California, despite the effect on fish. Tim Quinn, Executive Director of the Association of California Water Agencies, a lobbying group that represents more than four-hundred agencies that deliver ninety percent of the state's water, echoed the point:

> This is the most drastic cut ever to California water supplies. It is the most significant decision ever made in the implementation of either the state or federal Endangered Species Act. It's the biggest impact anywhere, nationwide (Taugher, 2007.)

In addition to dealing with the effects of a third year of drought, agencies that rely on Delta water suddenly had to rely on water reserves.

Water diversions, pollution from farms and cities, and other factors such as predation from striped bass, an introduced sport fish, contribute to the decline of the Delta smelt and other fish in the Delta. Judge Wanger's August 31 decision established temporary guidelines for the protection of these species. Related decisions by Judge Wanger over the following two years set into motion one of the single largest court-ordered water curtailments in California's history.

> California simply cannot lose important water supplies without real consequences throughout the state. This historic court decision affirms what the water community has realized for some time, but the general public may not fully appreciate--the Delta, both as a valuable ecosystem and essential water supply, is broken. This court ruling did not fix it.
>
> - Jeff Kightlinger, Metropolitan Water District General Manager

Delta Vision Case Study

On September 17, 2006, Governor Schwarzenegger issued Executive Order S-17-06, establishing Delta Vision, a program to develop sustainable management recommendations for the Sacramento-San Joaquin Bay Delta. Delta Vision relies on the growing consensus that existing conditions, regulatory structures, and management practices affecting the Delta are unsustainable. Executive Order S-17-06 emerged on the heels of SB 1574 and accompanying legislation related to the Delta and water quality issues.[1] SB 1574 created a cabinet-level Delta Vision Committee, chaired by the

[1] SB 1574 (Kuehl, D-Santa Monica); AB 797, AB 798, AB 1245: Wolk (D- Davis); AB 1881: Laird (D-Santa Cruz); AB 2515: Ruskin (D-Redwood City).

Secretary of the Resources Agency, tasked with developing a sustainable Delta plan by addressing the following[2]:

- Sustainable ecosystem functions, including aquatic and terrestrial flora and fauna.
- Sustainable land use and land use patterns.
- Sustainable transportation uses, including streets, roads and highways and waterborne transportation.
- Sustainable utility uses, including aqueducts, pipelines and power transmission corridors.
- Sustainable water supply uses.
- Sustainable recreation uses, including current and future recreational and tourism uses.
- Sustainable flood management strategies.
- Other aspects of sustainability deemed desirable by the committee.

In addition to the Delta Vision Committee, Executive Order S-17-06 established the Delta Vision Blue Ribbon Task Force ("Task Force"). Membership, conferred by gubernatorial appointment, included individuals with "diverse expertise and perspectives, policy and resource experts, strategic problems solves, and individuals having successfully resolved multi-interest conflicts" (Executive Order S-17-06, Sec 3). The Governor charged the Task Force with soliciting comments from a broad array of stakeholders and delivering an independent report to the Delta Vision Committee by January 1, 2008. The Task Force was to deliver a subsequent Strategic Plan by October 31, 2008.

The Delta Vision Committee held its inaugural meeting in March 2007 and regularly convened over the next two years in public and closed sessions. Meeting locations alternated between northern and southern California; however, most of the

[2] Executive Order S-17-06

meetings occurred in or near Sacramento. Delta Vision was on an accelerated timeline. The Task Force met a total of fourteen days in public sessions and relied on the recommendations of a forty-three member Stakeholder Coordination Group, advice from Delta Science Advisors, and the support of several departments and agencies of the State of California to accomplish the task. The Task Force accepted comments at public meetings and in writing, issued press releases encouraging public participation, and hosted web based meetings. The Delta Vision website at maintains an archive of the process. In January 2008 the task Force released the report titled :Our Vision for the California Delta". The report contains twelve integrated recommendations that serve as the foundation for the remainder of the Delta Vision process and for this study. The Delta Vision process continues. The Delta Stewardship Council, successor to the Blue Ribbon Task Force, is currently preparing an Interim Delta Plan. The final Delta Plan is due in 2012.

Organization of the Remainder of the Study

The main body of the paper contains five chapters. Building on this introduction, Chapter 2 establishes the broad theoretical framework used in the study and explores the relevant literature. I anchor the study question in three different analytical frameworks: John Kingdon's Multiple Steams theory, the Institutional Rational Choice theory, and Punctuated Equilibrium theory, and highlight relevant explanatory elements from each. In Chapter 3, I combined case study and content analysis methodological approaches to extract qualitative data. I then undertook quantitative analysis to identify those issues that

are important to Delta Vision stakeholders and to determine which stakeholder groups care most about each issue. In Chapter 4, I discuss study validity, present findings regarding the issues, and explore what we can learn from Delta Vision stakeholder experience. In the concluding discussion in Chapter 5, I discuss the public policy implications of my findings and suggest future research opportunities.

Summary

The events leading up to Delta Vision process span two centuries of contentious water rights conflict. Over the years, failed attempts to resolve the conflict and establish a workable truce among the many Delta interests frustrated stakeholders and degraded the environment. For a time CALFED promised to bridge the divide between water and environmental needs. However, CALFED's failure to produce desired results contributed to the growing belief that things needed to change. By 2006, an unlikely champion emerged. Governor Schwarzenegger, by issuing Executive Order S-17-06, set the state and the Delta on an ambitious path to sustainability.

Chapter 2

LITERATURE REVIEW

Policy formation is complex, seldom if ever lending itself to simple explanation. Some policy problems, like the wicked, vexing problems[3] that plague the Delta, are especially difficult to explain using a singular analytical tool (Antonsen et al. 2000, cited in Bundgaard & Vrangbæk, 2007.) Multiple Streams theory, a useful policy heuristic, is nonetheless insufficient to explain the dynamics of the Delta Vision policy process because of its lack of attention to the role that institutions play in enabling individuals to act according to their own self-interest. Extending the work of Bundgaard and Vrangbæk (2007), I combine insights from three different analytical frameworks: John Kingdon's Multiple Steams theory, the Institutional Rations Choice theory, and Punctuated Equilibrium theory to build a more robust theoretical framework.

The foundational framework for this study is Multiple Streams, which attempts to explain the policy process through the interaction of three normally independent and separate policy streams: the problem stream, the policy stream, and the political stream (Kingdon, 1995). Although limited in its applicability, Kingdon's insight nonetheless has particular explanatory value in understanding why issues emerge as priorities on policy agendas. The Multiple Streams metaphor suggests a non-linear policymaking path. Three process streams, operating continuously and separately, eventually connect or "couple" during windows of opportunity, producing outcomes that are unlikely under normal conditions. Coupling can occur serendipitously; or according to Kingdon, nudged by the

[3] Refers to problems that are persistent and intractable

guiding hand of policy entrepreneurs. However, not all actors in the policy process find this change in the status quo comforting or desirable. The Multiple Streams metaphor evokes this scene from the movie Ghostbusters (Reitman, 1984):

> There's something very important I forgot to tell you. Don't cross the streams… It would be bad… Try to imagine all life as you know it stopping instantaneously and every molecule in your body exploding at the speed of light.
>
> —*Egon Spengler on crossing proton streams*

Movies fans will recall that despite Egon's apocalyptic warning, the movie's protagonists eventually convince themselves that the risk of crossing the streams pales when compared to the "do nothing" alternative. In the end, Ghostbuster Peter Venkman resolves "…there is definitely a very slim chance we'll survive."

Theoretical Framework

Sabatier (1999) describes the public policy making process as the "manner in which problems get conceptualized and brought to government for solution." Policy problems and solutions are subject to a variety of influences including time, a complex cast of actors, goals that are competing and often ambiguous, technical and legal limitations, and shifting policy preferences. Elaborating, Sabatier et al. (1999) report on several promising policy theoretical frameworks and note the need for continued improvements in the ways that policy analysts attempt to make sense of the world. In particular, Sabatier calls for a strengthening of the scientific approach through the application of policy frameworks and theories, also known as lenses.

Because certain policy processes are inherently more complex, a single theory or framework may lack sufficient explanatory power to account for all of the variability in

the policy process. Ostrom (2006) notes the value in using multiple methods to strengthen the analytical process, and admonishes researchers to "pay attention to the structure of a situation and the underlying cultural, institutional, and biophysical context" when constructing a research project. By way of example, Bundgaard and Vrangbæk (2007) combine elements of two theoretical frameworks, Multiple Streams and Institutional Rational Choice, to gain a better understanding of public sector structural reform in Denmark.

This study builds on the example of Ostrom and Bundgaard and Vrangbæk by selecting Kingdon's Multiple Streams theory as the initial theoretical input, augmented by relevant elements of the Institutional Rational Choice and Punctuated Equilibrium theories. The study question focuses on the role that policy entrepreneurs play in moving Delta Vision issues from ideas to the policy agenda. In doing so, the study considers the effect of contingent factors identified in the literature, particularly focusing events, ambiguity, framing, venues of policy action, issue salience, and policy image. Following is a brief overview and justification for the selection of each.

The Multiple Streams Theory

Kingdon's Multiple Streams theory has been a touchstone of public policy research since it emerged in the mid 1980s. Recurring Multiple Streams themes include the role of policy entrepreneurs, the coupling of problem and solutions, and windows of opportunity. Multiple Streams theorizes that the problem, policy, and political streams interact at key points in time to create conditions that make it easier for new initiatives find their way on to political agendas. As conceptualized by Kingdon, the policy process

is a garbage can of ideas considered, discarded, and ultimately reclaimed in response to the actions of policy actors or entrepreneurs, the focus of this study. One of Kingdon's fundamental insights is that these actors watch opportunistically for the right time to advance policy outcomes by ensuring that decisions makers make the right choices (Zahariadis 1999). Students of Kingdon have found, however, that Multiple Streams offers an incomplete picture of what policy entrepreneurs do and how they do it.

The Institutional Rational Choice Theory

Scharpf, (1997) and Ostrom (1999) find that Institutional Rational Choice theory confers added explanatory power on how and why policy actors engage (as cited in Bundgaard & Vrangbæk, 2007.) Institutional Rational Choice relies on the premise that actors know what they want and make choices based on what they believe will achieve their goals (Riker, 1995). Elaborating, Riker notes that people are capable of prioritizing their goals, but seldom know how to do so. Miller (1992) observed that place, space, and interaction are fundamental in shaping human behavior and the choices people make. Social choice theorists argue in turn that groups of actors are better off making choices that reflect the preferences of the individuals who make up the group (Shepsle & Boncheck, 1997).

Institutional Rational Choice also explores a fundamental question in political collective action: the free rider problem. Why, for example, do policy actors spend resources on complex issues knowing that their influence may be limited and ineffective? Why do they engage when other capable actors are available to take the lead? Ostrom (1999) suggests that actors may seek to minimize regret, rather than maximize gain, when

weighing resource allocation choices. She illuminates further by specifying a broader set of conditions that inhibit free-rider behavior:

> Appropriators of a common-pool resources are much more likely to cooperate to address a shared dilemma if they (1) "share a common judgment that they will be harmed if they do not adopt an alternative rule", (2) "will be affected in similar ways by the proposed rule changes", (3) 'have low discount rates", (4) "face relatively low information, transformation, and enforcement costs", (5) "share generalized norms of reciprocity and trust", and (6) their numbers are relatively small and stable".

Institutional Rational Choice, in particular, focuses on the role of institutions to explain the actions of various policy actors. In Institutional Rational Choice and for this study, institutions are "the shared concepts used by humans in repetitive situations organized by rules, norms, and strategies" (Crawford & Ostrom, 1995). This construct implies that institutions are invisible, intuitive, and subject to individual interpretation. Ostrom (1995) suggests that researchers look for evidence of "rules-in-use" rather than "rules-in-form" to tease out the relevant institutions.

Finally, Institutional Rational Choice places an emphasis on institutional design, an element absent in most other policy frameworks. Miller (2000) argues that policy actors alter existing arrangements through information sharing. Actors who produce and disseminate information do so in ways that ensure that their preferences are the result of the decision making process. Effective policy makers, therefore, must find ways to sort and prioritize conflicting information (Jones & Baumgartner, 2005). Pollack (1997) declares that the decision to delegate authority from a principle or group of principals to an agent (i.e., the Delta Vision Task Force) is a special case of institutional design.

Punctuated Equilibrium Theory

Theories of individual and collective decision-making infuse the Punctuated Equilibrium theory (True et al, 1998). Baumgartner & Jones (1993) were the first to observe that although stability and incremental change characterize policy processes, occasional large-scale changes do occur. These punctuated events often result in significant departures from well-worn historic paths, dramatically altering and reshaping the policy landscape. Punctuated Equilibrium seeks to explain both static and dramatic change by emphasizing two elements of the policy process: agenda setting and issue definition. Sabatier (1999) calls attention to the importance of the structure of governing systems in Punctuated Equilibrium, noting that when policy subsystems break down (as in the management structure of the Delta), macro political institutions (in the subject case, the Governor of California) are more effective at addressing the problem(s). Cashore & Howlett (2007) and Repetto (2006) call for additional Punctuated Equilibrium research to expand our understanding of the theory as it relates to sub-levels of government policy making, and particularly in local environmental policy settings (as cited in Crow, 2010). As Crow further observes, Punctuated Equilibrium research focuses primarily at the national level. Because state and local governments frequently debate natural resource issues, the application of the Punctuated Equilibrium theory to this study may shed new light on the question.

Venue is a crucial Punctuated Equilibrium construct. Policy actors will often look for alternative policy venues to improve their chance to reshape the strategies of individuals and groups (Sabatier 1999). In a study of Colorado water law, Crow (2010)

examined three Punctuated Equilibrium components with relevance to this study: policy images, media coverage as it translates to agenda status, and the inclusion of new actors in the policy process. Crow found that Punctuated Equilibrium explained policy change accurately at the state level but concluded that the theory is less useful in explaining how policy change occurs in local communities.

Explanatory Elements of Analysis from Selected Policy Frameworks

The policy frameworks used in this study share several important concepts, or elements, that overlap to varying degrees. Events that are collectively viewed through multiple lenses can result in better study outcomes (Ostrom 1999). For instance, embedded in each of three theories employed in this study is the construct that policy actors or entrepreneurs exert influence in the policy process. The definition of each of those roles, however, differs between the three. The remainder of this chapter explores the common Elements of Analysis and describing how each contributes to this study's objectives.

Elements of Analysis

In this section, I describe two elements of analysis that are central to each of the three theories described above and critical to the questions I pose in this study: policy entrepreneurs and agenda setting.

Policy Entrepreneurs

Policy entrepreneurs figure prominently in Multiple Streams. Kingdon pioneered the use of the term, noting they

> could be in or out of government, in elected or appointed positions, in interest groups or research organizations. But their defining characteristic, much as in the case of a business entrepreneur, is their willingness to invest their resources – time, energy, reputation, and sometimes money-in the hope of a future return (p. 122).

Kingdon argues that policy entrepreneurs are essentially policy change agents. Unlike their more conservative counterparts, policy entrepreneurs are willing to go to great lengths to join, or couple, problem, policy, and political streams. Mindful of the risks to careers and reputations if they fail, Kingdon's entrepreneurs are necessarily pragmatic. These actors consciously weigh the tradeoffs, including the real costs of expending social and political capital, involved. Moreover, highly placed entrepreneurs often have more access to important networks, conferring a distinct advantage when the objective includes significant policy shifts.

Recent research has expanded our understanding of policy entrepreneurs. Mintrom & Norman (2009) build on Kingdon's definition by concluding that four additional dimensions characterize these actors: social acuity (the ability to operate successfully in networks), the ability to define problems, the ability to build and maintain teams (advocacy coalitions), and leading by example. Balla (2001) and Shipan & Volden (2006), further observe that policy change pursued by entrepreneurs is influenced by certain contextual variables and individuals undertake actions within those contexts. Shipan and Volden (2006) found, for example, that policy entrepreneurs were less effective when events were likely to result in legislative change. Similarly, where policy change was unlikely, skilled entrepreneurs were able to act in ways that moved agendas and policy outcomes in desired directions.

Mintrom and Norman (2009) argue that successful policy entrepreneurs display high levels of social acuity, or perceptiveness, and that this characteristic allows them to take advantage of "windows of opportunity," a metaphor embedded in Multiple Streams (Kingdon,1995.) By making good use of policy networks, entrepreneurs increase their understanding of issues. Acquiring relevant knowledge and gaining insight into the ideas, motives, and concerns of others who can influence policy outcomes enhances the probability that entrepreneurs will be successful. Consequently, policy entrepreneurs are most successful when they work effectively with others. Mintrom & Vergari (1996) found that policy entrepreneurs recognized the importance of developing and working with coalitions. Gaining support from groups that are unlikely allies can bolster entrepreneurial efficacy; a well-crafted coalition signals support that is deep and wide across the policy divide, insulating against the arguments of those who oppose the new policy direction (Baumgartner & Jones, 1993).

This heightened social acuity is especially effective with respect to the problem stream. Boscarino (2009) notes that public and governmental attention to policy issues "waxes and wanes" over time because entities and individuals are limited in their ability to pay attention to large complex issues, a condition Boscarino describes as carrying capacity. Policy entrepreneurs interested in finding solutions to long-standing policy issues must therefore engage in "problem surfing… in pursuit of the next big wave". Problem surfing, analogous to Kingdon's "garbage can" model, occurs as policy advocates argue for the same solution (i.e., the Peripheral Canal) by citing different problems over time. Baumgartner and Jones (1993) declare that policy entrepreneurs

often “lie in wait” and that “the trick for a policy entrepreneur is to ensure that the solution he or she favors is adopted once a given problem has emerged on the national agenda.” In a study of advocacy group strategies affecting U.S. Forestry policy, Boscarino (2009) further found that advocacy decision making is complicated and that groups do not engage in problem surfing at the same rates.

Agenda setting

Agenda setting is the act of giving priorities to alternative policy issues (Hayes, 2008.) Agenda-setting literature offers a diverse range of conceptual frameworks. Multiple Streams, alone or modified by others, holds up well in the agenda-setting literature (Baumgartner & Jones, 1993.) Bakenova (2008) argues that frameworks that include media attention, the public, and external events can increase our understanding of why and how issues emerge on the policy agenda. In a study on voting behavior, Hayes (2008) observed that controlling the agenda is essential to successful political campaigns, because people process information differently. In particular, voters tend to sort information into bins that are either consistent with or contradictory to their personal views. Finally, (Cobb & Elder, 1972) found that political actors with “gate-keeping” powers have significantly more influence over the policy process.

Following Pollack (1997), I posit that policy actors who are searching for ways to reshape policy dialogue and outcomes influence agenda setting on two tiers: formal and informal. Pollack defines formal agenda setting as “the right to set the formal or procedural agenda by establishing provisions that can be adopted more easily than amended, thereby structuring the policy choices” (p. 121.) Turning the coin over, he

defines informal agenda setting as “the ability of a policy entrepreneur to set the substantive agenda of an organization, not though its formal powers, but through its ability to define issues and present proposals which can rally consensus among the final decision makers” (p. 121.)

Formal agenda setting, according to Pollack, focuses on the power of agenda setters to influence policy outcomes even when the power to make the final decision resides elsewhere. Pollack found that five key variables limit the power of policy principals: “the power to propose, voting rules and amendment rules, distribution of preference, strategic voting and time horizons, and costs of delay. Shifting conditions that affect these variables confer a positive or negative cost to the agenda setter.” The following are particular relevant to this study (Pollack, 1997.)

- “The power of the agenda setter diminishes when amendments to draft documents are allowed without restriction and by simple majority vote, and when a compromise is preferable over prolonged conflict.
- The power of the agenda setter is strengthened when the agenda setter enjoys the exclusive right to propose, is sophisticated and selects a variation on the “ideal solution” that is likely to be preferred to the status quo, and when decision makers are impatient (i.e., subject to unacceptable losses).”

Fiorina (1981) observes that authorities may chose to delegates power to an agent in controversial settings with the goal of “shifting the responsibility” away from political principals. On the other hand, Governor Schwarzenegger may have established a higher level of credibility in the Delta Vision process by delegating authority to the Blue Ribbon Task Force, a presumed impartial agent (Majone,1994.) However, delegating authority

has a down side. Side effects, known as agency losses, are inevitable because there is seldom full alignment between the needs of political principals and the agents who now control the process (McCubbins and Kiewiet, 1991):

> There is almost always some conflict between the interests of those who delegate authority (principals) and the agents to whom they delegate it. Agents behave opportunistically, pursuing their own interests, subject only to the constraints imposed by their relationship with the principal (p.5).

In response, political principals who need to maintain some control impose mechanisms, as Governor Schwarzenegger did when he issued Executive Order S-17- and narrowed the scope of the Task Force's activity. Additional oversight mechanisms include control over budgets, appointments, and overriding the process by enacting new legislation (McCubbins & Page, 1987).

Contingent Factors

In order to explain more fully which issues are most important to Delta stakeholders I employ several contingent factors from the Multiple Streams, Punctuated Equilibrium, and Institutional Rational Choice Theories. Namely focusing events, problem ambiguity, framing, venues of policy action, issue salience, and policy image.

Focusing Events

Focusing events play a prominent role in Multiple Streams and Punctuated Equilibrium theory. Focusing events explain how very large, catastrophic events catapult otherwise obscure issues onto the agenda. Wood (2007) notes, that for a time, these events focus the attention of political actors on a single policy problem to the exclusion of others. Birkland (2004) offer the following criteria to distinguish potential focusing

events from other phenomena and to explain their influence on group and agenda dynamics:

- Focusing events occur suddenly.
- Focusing events are relatively rare.
- Focusing events are large in scale.
- Focusing events are known to policymakers and the public virtually simultaneously.

Wood (2007) observes that focusing events can produce consensus where none was possible before, as demonstrated by the rapid passage of the USA Patriot Act following the events of September 11, 2001. In his study of the 1998 Master Settlement Agreement between the tobacco industry and the states, Wood found that the Agreement was not a typical focusing event even though it shifted substantial attention to the topic of tobacco regulation, produced major policy change, and shifted the policy image of the domain. Woods resolved the discrepancy using tipping point theories to expand on theoretical distinctions articulated by Baumgartner and Jones (1993) between “triggering” events and “consolidating” or tipping events.

Multiple Streams identifies focusing events, crises, and symbols as the catalysts of major policy change and holds that government action usually occurs in response to problems rather than initiating new programs (Kingdon, 1995). Kingdon explains further that focusing events and crises are essential to the coupling process that facilitates the opening of policy windows. Focusing events are equally important in the Punctuated Equilibrium theory because they draw attention to a single issue by shifting a policy

system from negative to positive feedback. Although these shifts are critical, Baumgartner & Jones (1993) caution that the presence of focusing events alone is insufficient to explain all policy punctuations.

Tipping events are a special case of focusing events. Unlike other focusing events, however, tipping events need not be large or dramatic. A tipping event can be an occurrence in the natural world, a judicial or regulatory decision, a political event, or just an idea (Wood, 2006). For example, Wood found that a 1988 judicial decision was the event that forced land managers to develop a plan to protect the endangered spotted owl in the Pacific Northwest. Similarly, Kingdon (1995) observes, "focusing events are not always so straightforward" (p. 96), and that when an idea gains sufficient momentum it "tips" (p. 139). Gladwell (2000) describes a tipping point as ". . . that magic moment when an idea, trend, or social behavior crosses a threshold, tips, and spreads like wildfire" and argues that tipping is not random, but a function of the "stickiness" of the message, the communicative abilities of the messenger, and the receptiveness of the environment. Baumgartner and Jones (1993) elaborate further by observing that these events "are important more because of their timing in relation to other agenda events than because of their intrinsic value. The same event at another time would not have triggered anything" (p. 130.)

Problem Ambiguity

I agree with Feldman & Khademian's (2002) assessment of ambiguity as "a state of having many ways of thinking about the same circumstances or phenomena."

Zahariadis (1995) notes that Multiple Streams only applies under conditions of ambiguity and later offers the following additional insight:

> The problem under conditions of ambiguity is that we don't know what the problem is; its definition is vague and shifting. Distinguishing between relevant and irrelevant information is problematic and can lead to false and misleading facts. Choice becomes less an exercise in solving problems and more an attempt to make sense of a partially comprehensible world (1999).

March (1994) states that ambiguity differs from uncertainty and is not resolved by more information. In a study of the European Community, Pollack (1995) found that actors who possessed unique policy expertise enjoyed informational advantages over competing agenda setters where ambiguity was present. However, Shepsle (1972) observes that ambiguity is often the result of an intentional political strategy: i.e., politicians can be intentionally vague on contentious or polarizing issues to avoid offending voters. Alternately, Page (1978) theorizes that ambiguity is the result of unintended and unavoidable communication problems (as cited in Campbell, 1983.) In other words, both politicians and voters have limited resources to articulate and understand the issues. The literature suggests three possible causes of issue ambiguity: issue salience, how diverse public opinion is, and how closely the message is to the public's stand on the issue (Campbell 1983).

Framing

Although closely related, problem definition and agenda setting may lead to contradictory results (Bakenova 2008). Cobb & Elder (1972) explain: "even if an issue has sufficient traction to make it on to the formal political agenda, only half of the race is

run." Dery (2000) concludes, "agenda access is not the goal but potentially a means to advance one's cause" and that the rest of the race is about defining the problem in ways that encourage democratic support. Moreover, Boscarino (2009) notes that while significant attention has been paid to agenda setting related to *problem*-focused advocacy, little research has focused on the challenges and opportunities facing policy actors promoting a policy *solution*.

Problem definition is inherently a political act (Mintrom and Norman, 2009). Rochefort & Cobb (1994) observed that problems that are "severe, frequent, proximate, and novel" are more likely to end up on political agendas. Consequently, policy entrepreneurs often describe problems in language that implies a crisis is eminent (Henig, 2008) and that ignoring the problem is unacceptable. Kingdon (1995) argues that those who control the problem definition have the power to change the policy debate and, by extension, influence outcomes. Therefore, policy entrepreneurs frequently define problems in ways that attract the attention of decision makers best positioned to affect desired solutions. (Fisher & Patton, 1991; Heifetz, 1994).

Venues of Policy Action

The importance of a receptive policy environment is well documented (Wood 2006). Venue shopping can alter the institutional structures of the venues that exert influence over policy issues (Crow 2010). Policy proponents will often look for friendlier venues when the stakes are high (Baumgartner, Jones, & MacLeod, 2000.) Quoting Baumgartner and Jones (1991):

> Each venue carries with it a decisional bias, because both participants and decision-making routines differ. When the venue of a public policy changes, as often occurs over time, those who previously dominated the policy process may find themselves in the minority, and erstwhile losers may be transformed into winners (p. 1047)

Issue Salience

Issue salience, most often discussed in the context of voting, has value in this study for two reasons: it helps to explain how political adversaries compete with each other and sheds light on the relationship between political positions and voter preferences (Netjes, 2007). I posit that these relationships, slightly modified, are also present in processes like Delta Vision.

Budge and Farlie (1975) theorize that political parties consciously and strategically emphasize particular issues, always searching for ways to maximize gains. The same is true for policy advocates. Salience theorists observe that political parties "own" particular issues (e.g., the Democratic Party championed national healthcare while the GOP focused on immigration reform). A slightly different concept, also found in election studies and studies on voting behavior, suggests that an issue becomes salient when there are a variety of opinions (Netjes 2007). RePass (1971) illustrates the point:

> If parties promote pretty much the same ideas, it becomes hard to distinguish between them, let alone to make a well-thought vote choice. For example, if one party were to propose immediate withdrawal from the EU, whereas another party would argue for the transfer of all policy competences to the EU level, this is bound to become a salient issue.

Consequently, salience evolves as positions change. Following Randle (1987), U-Jin Ang and Peksen (2007) "conceive of an issue as a disputed point or question, the subject of a conflict or, controversy," and assert that contentious issues influence crisis outcomes. For

example, their 2007 study on the efficacy of economic sanctions in China concluded that asymmetry in the perception of issue salience has a dramatic effect on sanction outcomes (U-Jin Ang & Peksen, 2007).

Policy Image

Very few events are so clear that additional interpretation or meaning fails to improve our understanding of them. Some meanings, however, are easier to explain or understand than others. Hurricane Katrina and the events of September 11, clearly unprecedented national disasters, are poignant examples of how difficult it can be for people and institutions to reach agreement. Crow (2010) states that policy images are "how we understand and discuss policy issues." Politicians indirectly influence our understanding because individuals today are more likely to emphasize "who" rather than "what" (Capelos 2010). For example, Asch (1952) found that people interpret sentences based on the message, and that messages change with the messenger (as cited in Capelos, 2010.) Put another way, people react to the content of the message based on how they feel about the messenger.

Some meanings are especially effective, exhibiting the characteristics that Gladwell (2000) calls their "stickiness factor." An idea that is easy to understand, makes intuitive sense, and is highly memorable is "sticky" (Gladwell 2000). Kingdon (1995) says that ideas matter in the policy debate. Gladwell illuminates by adding " ideas that are stickier have a better chance of surviving and landing on a policy agenda."

Summary

Political research is complex, and consequently, may be easier to explain if viewed through multiple theoretical lenses. I utilize the Multiple Streams, Punctuate Equilibrium and Institutional Rational Choice theories to anchor the study framework. Policy entrepreneurs, acting self interestedly, will engage in informal agenda setting to elevate their issues to a place on the policy agenda. Contingent elements, including issue salience and focusing events, affect how successful stakeholders will be.

Chapter 3

METHODOLOGY

Research Approach

This study employs an inductive research approach to determine which issues are important to Delta Vision stakeholders. Using the twelve integrated and linked recommendations outlined in the Final Delta Vision report as a foundation, I code and compare stakeholder testimonies to answer the following questions:

1. What did Delta Vision stakeholders consider important?
2. What stakeholder groups are the main sources/subjects of the statements?

I did not attempt to establish causal relationships between what stakeholders said and the twelve recommendations. Instead, I envision a two-tiered approach. I use qualitative and quantitative analysis in this study to determine what is important to Delta stakeholders and which stakeholder groups care most about important issues, and leave questions of cause and effect to subsequent research.

Study Sample

The data source is the archive of comment letters (hereinafter "testimonies") submitted to the Delta Vision Committee and the Task Force. I derived the data from stakeholder testimonies dated between September 11, 2007 and January 29, 2008, dates that mark the release of the initial draft Delta Vision planning document dated September 11, 2007 (the "embryonic draft plan") and end of the Delta Vision comment period. During that time, stakeholders also submitted white papers, reports, position papers, and other general background information to the Delta Vision Committee and the Task Force.

I am equally interested in what effect stakeholder testimonies had on the final Delta Vision Report dated January 2008. However, in the interest of narrowing my research question, I leave the analysis of those materials to subsequent research.

Collection and Tabulation of Data

I obtained seventy-two valid testimonies from the Delta Vision website archive. I then derived Problem Domains (Table 3.1) based on the Delta Vision Plan twelve integrated and linked recommendations outlined below:

1. The Delta ecosystem and a reliable water supply for California are the primary, coequal goals for sustainable management of the Delta.

2. The California Delta is a unique and valued area, warranting recognition and special legal status from the State of California.

2. The Delta ecosystem must function as an integral part of a healthy estuary.

4. California's water supply is limited and must be managed with significantly higher efficiency to be adequate for its future population, growing economy, and vital environment.

5. The foundation for policymaking about California water resources must be the longstanding constitutional principles of "reasonable use" and "public trust;" these principles are particularly important and applicable to the Delta.

6. The goals of conservation, efficiency, and sustainable use must drive California water policies.

7. A revitalized Delta ecosystem will require reduced diversions—or changes in patterns and timing of those diversions upstream, within the Delta, and exported from the Delta—at critical times.

8. New facilities for conveyance and storage, and better linkage between the two, are needed to better manage California's water resources for both the estuary and exports.

9. Major investments in the California Delta and the statewide water management system must integrate and be consistent with specific policies in this vision. In

> particular, these strategic investments must strengthen selected levees, improve floodplain management, and improve water circulation and quality.
>
> 10. The current boundaries and governance system of the Delta must be changed. It is essential to have an independent body with authority to achieve the co-equal goals of ecosystem revitalization and adequate water supply for California—while also recognizing the importance of the Delta as a unique and valued area. This body must have secure funding and the ability to approve spending, planning, and water export levels.
>
> 11. Discouraging inappropriate urbanization of the Delta is critical both to preserve the Delta's unique character and to ensure adequate public safety.
>
> 12. Institutions and policies for the Delta should be designed for resiliency and adaptation.

Boscarino (2009) suggests that researchers utilize broadly framed metrics (e.g., water quality) to reduce the potential that coding will result in a "biased emphasis on a narrow aspect of an issue (e.g., stream siltation from clear-cutting)." Heeding her advice, I distill the Twelve Recommendations to six problem domains by combining several narrowly described issue areas. I assign each a unique code and add a seventh domain, Alternate Decision Space, to capture problems and solutions identified by stakeholders but not addressed in Delta Vision. The seven problem domains, identified in Table 3.1 below, frame the content analysis procedure.

Table 3.1 Code Form Framework for Content Analysis

Problem Domain	Definition
Continued threat of flood	Refers to levees and floodplain management
Maintaining a reliable water supply system	Refers to conveyance, storage, and water conservation
Sustaining a place based vision of the Delta	Refers to stakeholder affiliation, state/local perspective, public safety, urbanization, and unique legal status for the Delta
Continued degradation of water quality and fisheries resources	Refers to ecosystem and fisheries health and water quality
Economic inefficiency and losses	Refers to beneficiary pays, cost to society, and economic growth
Effective governance	Refers to regulatory authority, constitutional principles, secure funding, resiliency, and adaptability
Alternative decision space	Refers to problems and solutions identified by stakeholders but not addressed in Delta Vision

Data Collection Process

Neuman (1994) describes content analysis as a "well-developed but underused" technique (as cited in Howland et al, 2006) "with great potential for studying beliefs, organizations, attitudes and human relations." Content analysis utilizes data gleaned from written documents to produce an "objective analysis of messages ... (which) is accomplished by means of explicit rules" (Berg, 1998.) However, Neuendorf (2002) cautions that the methodology is "limited to describing the characteristics of messages or to identify relationships among them."

Researchers must balance advantages and disadvantages when choosing between research methodologies. Sabatier & Jenkins-Smith (1993) note that although content analysis is time consuming, subjective, and often undertaken without a sound theoretical

foundation, it is a "relatively exact" research method when undertaken properly. The advantages of content analysis are 1) it is unobtrusive, 2) it can shed light valuable historical and cultural insights, and 3) it allows for both qualitative and quantitative assessment. These latter qualities make it an ideal research tool for this study. Specifically, I make use of relational analysis, a type of content analysis that requires the researcher to develop concept categories, or "domains" to guide the coding process.

I catalogued testimonies retrieved from the Delta Vision website temporally according to stakeholder affiliation. I then coded each of the seventy-two testimonies using the study Code Form (Appendix A). I organized the study Code Form into seven broad categories that coincide with the problem domains from Table 3.1. To allow for greater precision in the coding process, I subdivided the seven domains into fifty-nine separate lines that describe "problems or solutions" attributed to the Delta. I adapted several of the categories from similar studies involving Delta stakeholders (Leach et al, 2002) and identified others from the continuing discourse surrounding Delta Vision.

Unit of Analysis

The Unit of Analysis is the individual testimony. I recorded codeable statements from each testimony and ranked them based on an ordinal four point Likert scale ranging from "Not Important" to "Very Important." Each codeable statement contains a phrase, concept, sentence, passage, or theme that reflects a similar meaning to that prescribed in the "problems or solutions" variables. I added a fifth ranking, Loudness, to record codeable statements that refer to the same issue multiple times in a single testimony. Loudness is expressed as a function of the first coded issue statement. For example, a

statement coded as “Somewhat Important” received a valuation of 3.0. However, if subsequent statements in the same testimony echoed or reinforced the first statement I added a tenth of a point to the score. In other words, each additional supporting statement on the same issue increased the volume of the statement by ten percent.

Study Validity

Content analysis is especially prone to coder bias, both in the design and execution of the study, as the analysis and collection of data require significant judgment on the part of both the researcher and coders. The researcher must be diligent to ensure that the coding framework represents valid theoretical concepts. Framework categories must be “mutually exclusive and exhaustive” (Stemler, 2001.) I utilize *a priori* coding and establish the categories prior to the analysis based on my understanding of the relevant theories and familiarity with the Delta Vision process.

Researchers can reduce errors by training coders in the study’s specific subject matter. Coding errors can result from either inter-coder reliability or intra-coder reliability. Intra-coder reliability, also known as stability (Stemler, 2001), requires same coder consistency among various coding events. Inter-coder reliability, also known as reproducibility (Stemler, 2001), applies when the analysis is performed by multiple coders.

Cohen’s KAPPA measures coder reliability, a measure of how well raters agree. A KAPPA score above 0.60 is usually sufficient to demonstrate reliability. Cohen (1960) identifies three assumptions that must be in place when using the KAPPA test: ‘the units of analysis must be independent; the categories of the nominal scale must be independent,

mutually exclusive, and exhaustive; and coders must operate independently of one another" (as cited in Stemler, 2001.) Coder reliability can be difficult to achieve due to unclear coding guidelines, inadequate training, and coder fatigue (Stemler, 2001.) Because I was the only person who coded testimonies, I am unable to assess inter-coder reliability. My results, therefore, are preliminary.

Data Analysis

I use descriptive statistics to determine who testified and how often, and which issues were important. I entered data into a Microsoft Excel spreadsheet and imported the file into SPSS software to produce descriptive statistics. I then compared the means of the variables to determine the issues that were the most salient. Because testimonies frequently mentioned only one or two of the issues I was interested in, the data set contains a large number of missing data values. In addition, I observed low response rates in several of the fifty-nine subcategory variables. To improve the robustness of my analysis, I recoded the subcategory variables into twelve Aggregated Variables (Table 3.2). I ran bivariate correlations on the Aggregated Variables using the Pearson product moment correlation to determine if any variable pairs were statistically significant and if so, the strength and direction of the relationship.

Table 3.2 Recoded Aggregated Variables

Aggregated Variables	Subcategory variables
Inadequate Facilities	*inadequate conveyance facilities, inadequate storage, peripheral canal*
Flood Threat	*aging levees, inadequate floodplain management, climate change, inadequate storage, building in flood prone areas*
Interagency Coordination	*poor interagency coordination, increased demand on resources, amount of water exported, amount of water transferred*
Stressors	*drought, entrainment, inadequate freshwater flows, municipal water pollution, agriculture water pollution, pollution in general*
Increased Demand for Water	*water transfers, growing demand*
Uphold Constitutional Principles	*uphold constitutional principles*
New Delta Governance	*spending authority, land use authority, resilient institutions, adaptable policies, secure funding, adaptable institutions, control over water exports, need more federal oversight, need more state oversight, need more local oversight, science advisors*
Economic efficiency	*beneficiary pays principle, cost to society, more economic growth is needed, less economic growth is needed, continue agricultural uses*
Delta as Place	*Delta legacy communities, Delta as a statewide resource, local perspective, public safety, inappropriate urbanization, unique legal status for Delta, tourism, recreation*
Inefficient Water Use	*inefficient use of water: agriculture, inefficient use of water: urban, inefficient use of water: operators*
Acts of god	*Drought, seismic threats*
Water Conservation	*Water conservation urban, water conservation agriculture*

Based on my understanding of Delta issues I identified eleven stakeholder affiliations likely to participate in Delta Vision: the public, water interests, environmental interests, local government, state government, federal government, experts/scientists, sport fishers, environmental justice interests, business/development interests, and agriculture. Stakeholders affiliated with eight of those groups submitted valid

testimonies. A minority of stakeholder interest groups—water interests, local government, and experts—account for two-thirds of the testimonies (Table 3.3 below.)

Table 3.3 Stakeholder Affiliation Percent of Total

Stakeholder	Frequency	%
Public	7	9.7
Water Interests	26	36.1
Environmental	7	9.7
Local Government	13	18.1
State Government	1	1.4
Experts	9	12.5
Business/Development	6	8.3
Agriculture	3	4.2
Environmental	7	9.7
Total	72	100.0

Summary

The data set consists of coded statements from of seventy-two testimonies. I use descriptive statistics to answer questions related to issue importance and stakeholder affiliation. A minority of the stakeholder groups account for two-thirds of the testimonies submitted to Delta Vision between release of the embryonic draft Delta Vision plan and the Final Delta Vision plan.

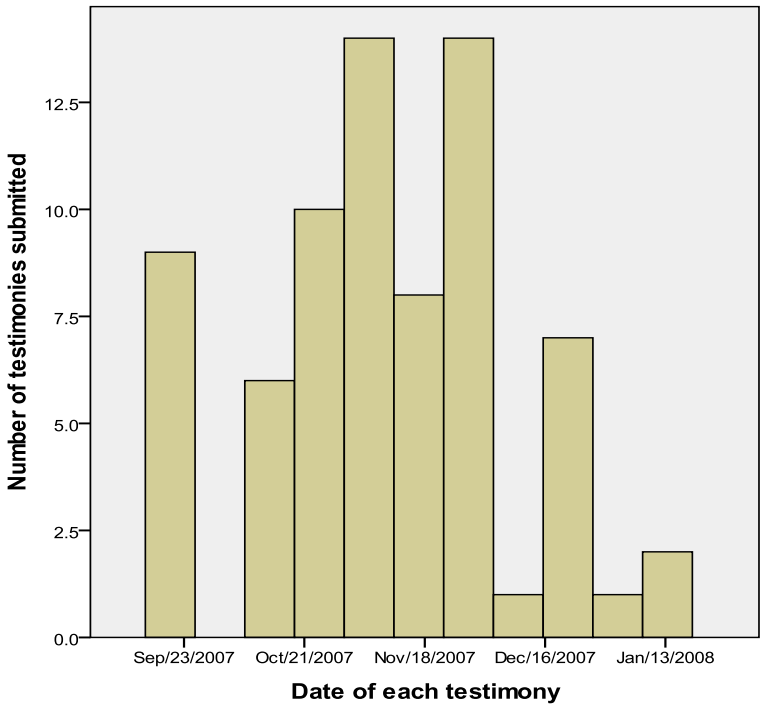
Chapter 4

DATA ANALYSIS, RESULTS, AND DISCUSSION

This chapter describes the results of my qualitative analyses, including descriptive statistics, bivariate correlations, and the comparison of means among the stakeholder groups. The Task Force released four iterations of the Delta Vision plan between September 11, 2007 and January 2008. This aggressive timeline gave stakeholders little time to review and comment in step with each version of the draft document. The histogram below (Figure 4.1) shows the number of testimonies and the peak comment periods. Stakeholders submitted the majority of comments after the release of the second and third draft Delta Vision plans.

I observed that many of the testimonies lagged behind the release of the next iteration of the document. I attribute this to several factors. First, stakeholders who represent organizations usually have policies in place that discourage or prohibit the issuance of official communications without supervisorial review, and in most cases, approval of the content of the communication at the Director's level. On a more practical level, several Delta efforts, including the Bay Delta Conservation Plan, ran concurrently with Delta Vision, competing for stakeholder time and attention. Although interest was high among stakeholders already engaged in Delta issues, these same stakeholders likely found it difficult to engage fully in each Delta process. It is beyond the scope of this study to explore the question further; however, participation fatigue may explain why the number of testimonies submitted on the Delta Vision Plan is lower than expected.

Figure 1 Timing and number of testimonies



Descriptive Statistics

I use descriptive statistics to illuminate and clarify the relative importance of each issue area to participating stakeholders. Useful metrics include the mean (how important is the issue), the standard deviation (a measure of how much an individual stakeholder cared about a particular issue), and the minimum and maximum number of times an issue is mentioned (i.e., the frequency). I coded valid statements in testimonies according to the Code Form Guidelines in Appendix A. Because I recorded the loudness of stakeholder testimonies, I can also report the intensity of each issue.

Table 4.1 suggests that stakeholders believe Inadequate Facilities and Flood Threat to be two of the most important Delta issues. Stakeholders identified issues related

to Flood Threats and Inadequate Delta Facilities in at least forty percent of the testimonies but only mentioned Water Conservation eight percent of the time.

Table 4.1 Descriptive Statistics

	Mean	Standard Deviation	Minimum	Maximum
Inadequate Facilities	1.5442	1.84323	.00	4.30
Flood Threat	1.5083	1.82822	.00	4.30
Interagency Coordination	1.1523	1.66498	.00	4.40
Stressors	1.1222	1.63183	.00	4.30
Increased Demand for Water	1.0347	1.61439	.00	4.30
Uphold Constitutional Principles	.994	1.8111	0.0	4.90
New Delta Governance	.8819	1.56658	.00	4.00
Economic Efficiency	.8132	1.54765	.00	4.30
Delta as Place	.6546	1.36569	.00	4.00
Inefficient Water Use	.4361	1.17884	.00	4.40
Acts of god	.3931	1.13440	.00	4.30
Water Conservation	.2500	.85168	.00	4.00

A clear threshold for issue salience does not emerge from the descriptive analysis. However, stakeholders mentioned three additional issues—Increased Demand for Water, Stressors, and Interagency Coordination— in at least thirty percent of the testimonies. Because Delta issues and problems are enormously complex, I find it reasonable to conclude that an issue is salient if one out of four stakeholders considered it sufficiently

important to mention in a testimony. I therefore include “New Delta Governance” in the list of salient issues.

Few stakeholders (less than twenty-five percent) mentioned Inefficient Water Use, Acts of God, Delta as Place, Economic Efficiency, or Water Conservation as areas of concern. However, stakeholders who said Economic Efficiency, Inefficient Water Use, and Acts of God were important spoke thirty percent louder than those who identified New Delta Governance and Water Conservation. It is beyond the scope of this study to tease out the reasons why some stakeholders felt compelled to “shout with their words.” One explanation is that stakeholders who felt ignored in previous Delta dialogues believed they needed to turn up the volume to ensure Delta Vision would listen. Nonetheless, the descriptive statistics send a clear message: stakeholders felt they needed to raise their voices in all but two of the issue areas.

Bivariate Correlations

Descriptive statistics is a useful tool to demonstrate the relative magnitude of each variable in the study, but cannot identify how issues fit together or are related. I use bivariate correlations to answer that question. Table 4.3 depicts the bivariate relations between the twelve Aggregated Variables. Social science correlations can be difficult to interpret, because socials scientists are often interested in questions that lend themselves to qualitative rather than quantitative assessment. As a consequence, the literature does not agree on a rule for determining break points between correlations that are weak, moderate, or strong (Shortell, 2001). Because the coded statements in this study reflect

stakeholder attitudes, a notoriously difficult construct to evaluate, I expect the correlation coefficients to have a lower acceptable threshold.

The strongest correlations between aggregated variable pairs in this study are between Water Conservation and Acts of God (.566), between Interagency Coordination and Constitutional Principles (.423), between Inadequate Facilities and Water Conservation (.383), between Water Conservation and Flood Threat (.372), and between Acts of God and Flood Threat (.323). Statistically significant, but weaker, correlations exist between eight other variable pairs: Acts of God and Economic Efficiency (.275); Delta as Place and Interagency Coordination (.271); Inadequate Facilities and Inefficient Water Use (.269); Water Conservation and Inefficient Water Use (.269); Acts of God and Inadequate Facilities (.264); Delta as Place and Economic Efficiency (.259); Demand for Water and Economic Efficiency (.256); and Economic Efficiency and Flood Threat (.255).

Although these relationships appear promising, it is important to note that bivariate correlations reflect the number of times stakeholders identified issues associated with each Aggregated Variable and whether or not the variables are related to each other beyond chance. Because a small number of testimonies identified issues associated with the weakly related variables, subsequent research could result in different findings. In addition, the bivariate correlations do not reflect the direction (positive or negative) of individual testimonies. For example, the strongest relationship in this study—between acts of god and water conservation—does not imply that stakeholders whose testimonies suggest that acts of god are more important than other issues also believed that water

conservation was equally important. To answer that question I return to descriptive statistics and compare means.

Means Comparison

I compare the means of the twelve Aggregated Variables across stakeholder affiliations and find significant differences among the stakeholder groups for three of the variables: Inadequate Facilities, Delta as Place, and Inefficient Water Use. Table 4.5 depicts the descriptive statistics. However, a more instructive way to view the information is to ask how opinions about the twelve Aggregated Variables differ among the eight stakeholder groups that submitted testimonies. The data suggest that water and environmental interests are more likely than local governments to identify Inadequate Facilities as a Delta issue. My preliminary findings also suggest that environmental and local government interests are more likely than water interests to consider Delta as Place important, and environmental interests are as likely as water interests are, and more likely than local governments, to view Inefficient Water use as a significant Delta issue.

Table 4.2 Pearson's Bivariate Correlations Among Variables (N=72)

		Inadequate Facilities	Flood Threat	Interagency Coordination	Stressors	Increased Demand for Water	Uphold Constitutional Principles	New Delta Governance	Economic Efficiency	Delta as Place	Inefficient Water Use	Acts of God	Water Conservation
Inadequate facilities	Pearson Correlation	1											
	Sig. (2-tailed)	(.000)											
Flood Threat	Pearson Correlation	.220	1										
	Sig. (2-tailed)	(.063)	(.000)										
Interagency coordination	Pearson Correlation	.158	.010	1									
	Sig. (2-tailed)	(.184)	(.932)	(.000)									
Stressors	Pearson Correlation	.131	.079	.181	1								
	Sig. (2-tailed)	(.272)	(.511)	(.127)	(.000)								
Increased demand for water	Pearson Correlation	.211	.221	.230	.198	1							
	Sig. (2-tailed)	(.075)	(.062)	(.052)	(.096)	(.000)							
Uphold constitutional principles	Pearson Correlation	-.078	-.158	**.423****	.044	.026	1						
	Sig. (2-tailed)	(.514)	(.185)	(.000)	(.712)	(.829)	(.000)						
New Delta governance	Pearson Correlation	-.128	.065	.032	.053	.146	.080	1					
	Sig. (2-tailed)	(.286)	(.585)	(.790)	(.658)	(.220)	(.506)	(.000)					
Economic efficiency	Pearson Correlation	.066	**.255***	.197	.127	**.256***	.011	.205	1				
	Sig. (2-tailed)	(.582)	(.031)	(.096)	(.286)	(.030)	(.924)	(.083)	(.000)				
Delta as Place	Pearson Correlation	-.103	.074	**.271***	.006	.099	-.045	.123	**.259***	1			
	Sig. (2-tailed)	(.387)	(.539)	(.022)	(.962)	(.407)	(.708)	(.302)	(.028)	(.000)			
Inefficient water use	Pearson Correlation	**.269***	.081	.097	-.031	.183	-.127	.152	.021	.052	1		
	Sig. (2-tailed)	(.022)	(.501)	(.419)	(.795)	(.124)	(.286)	(.203)	(.859)	(.664)	(.000)		
Acts of god	Pearson Correlation	**.264***	**.323****	.014	.055	.006	-.075	.088	**.275***	-.051	-.004	1	
	Sig. (2-tailed)	(.025)	(.006)	(.906)	(.646)	(.963)	(.531)	(.465)	(.019)	(.670)	(.976)	(.000)	
Water conservation	Pearson Correlation	**.383****	**.372****	.161	.069	.147	-.054	.022	.209	.093	**.269***	**.566****	1
	Sig. (2-tailed)	(.001)	(.001)	(.175)	(.565)	(.217)	(.653)	(.852)	(.078)	(.435)	(.023)	(.000)	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.3 Comparison of Means: Issues and Stakeholder Affiliation

Stakeholder Affiliation		Inadequate facilities	Delta as Place	Inefficient water use
Water Interests	Mean	2.1865	.2308	.4231
	N	26	26	26
Environmental	Mean	2.5000	1.1429	1.6286
	N	7	7	7
Local Government	Mean	.3077	1.5872	.0000
	N	13	13	13
Total	Mean	1.7033	.7529	.4870
	N	46	46	46

Summary

The data reveal potential relationships between the twelve Aggregated Variables suggesting that stakeholders engaged in the Delta Vision process are aware of the array of salient issues affecting the Delta and are willing to act as agents of change. In addition, I found potential synergy among three of the eleven stakeholder affiliations. In the final chapter, I explore the implications of these findings as they relate to the Delta Vision process and the continuing Delta discourse.

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

Overview

In this chapter, I answer the two questions posed at the start of the study: what issues are important to Delta Vision stakeholders and which stakeholder groups care most about each issue? By answering these questions, I hope to contribute to the broader understanding of Delta stakeholder motivation and needs. Based on the high stakes involved in Delta Vision, I predicted that stakeholder involvement would be greater and would cover a wider range of issues than I documented.

Study limitations

This study, like all original research, has limitations. First, the study relies on a relatively small data set; the preliminary findings, therefore, are not representative of all Delta stakeholders. Second, the study of social science problems is complex and finding the right metric is often a challenge. Additional factors that influence stakeholder opinions exist, but I could not account for them in this study. I was also unable to account for the possibility that stakeholders utilized alternate venues to promote their issues. An extension of this research could attempt to answer those questions. Finally, testimonies represent a snapshot in time; stakeholder opinions get stronger as the issue becomes more relevant and weaker when the issue is remote (Capelos 2010). Moreover, organizations, which comprise the majority of entities submitting testimonies, can change their position on an issue due to factors that are undetectable outside of intimate political circles. A

longitudinal study to track stakeholder participation throughout the entire Delta Vision process could tease out this variability and assess its importance.

Discussion

Original research often yields surprising results. I found correlations among many of the Aggregated Variables, albeit at low thresholds. It is possible the relationships were enabled by the use of broadly framed variables as recommended by Boscarino (2006); however, each of the stronger correlations appears reasonable based on my knowledge of Delta issues and the theoretical framework I utilize in Chapter 2.

The majority of stakeholders in this study are comprised of three interest groups that are ubiquitous in the water policy arena (water interests, local governments, and experts.) Not surprisingly, most of the stakeholders that submitted multiple testimonies came from one of these groups. In contrast, few individuals from the other stakeholder affiliations took the time to comment; I particularly note the absence of environmental justice and Delta landowner voices. Stakeholder participation is contingent on many factors; among those is the sheer number and intensity of concurrent Delta processes that compete for stakeholder attention. Additional research would be useful in identifying the factors that Delta stakeholders weigh when deciding whether to participate, and more importantly, which effort is worth their time.

The data suggest that few stakeholders outside of the current Delta policy circle are engaged in the process. As a result, it would be premature to place too much importance on my preliminary findings. The testimonies reveal only one new idea

beyond those already in discussion: the use of desalination technology to increase California's water supply.

Utility of Theoretical Frameworks to the Study

In addition to answering the two study questions above, I assessed the explanatory power of the Multiple Streams, Punctuated Equilibrium, and Institutional Rational Choice theories to my findings. I explore the utility of those theories to this study and discuss the applicability of informal agenda setting, temporal sorting, entrepreneurial influences, and framing to the study results.

I found explanatory power in each of the three theoretical frameworks, but not equally. Delta Vision falls squarely within the Multiple Streams rubric. Stakeholder testimonies suggest a high level of entrepreneurial engagement, even among stakeholders who are less familiar with the public policy process. Stakeholders repeatedly said, "…now is the time to act…" reinforcing the concept that windows of opportunity are opening and that stakeholders understand the significance. Water interests, traditional supporters of new water storage and conveyance infrastructure, effectively linked the problem stream (lack of a reliable water system) with a solution (build the peripheral canal). Other stakeholders, equally emphatic, disagreed. In the words of one testimony "anything short of the construction of a new 'through delta conveyance system' would be a failure in our opinion" (California Cotton Ginners & Growers Associations dated September 20, 2007.)

As expected from Institutional Rational Choice theory, I observed a decidedly self-interested viewpoint in most of the testimonies. Few testimonies advocated their

viewpoint to the exclusion of others. The notable exception was a consistent opinion from environmental stakeholders that new water storage should not be part of the Delta solution.

Several weak correlations among the Aggregated Variables suggest the potential for new "opinion alignment" resulting from Governor Schwarzenegger's formal agenda setting via S-17-06. For example, Rosen (cited in Capelos, 2010) found that presidents were often able to change public opinion on highly salient domestic issues. Weak correlations between "Delta as Place" and "Interagency Coordination" suggest a subtle shifts in stakeholder attitudes. Several testimonies advocated for a Delta managed for both ecosystem health and water reliability, even as they acknowledged the difficulty in achieving both goals. Stakeholder attitudes that shift away from the extreme to the center could cause unlikely advocates to support issues important to other stakeholder groups.

Due to this study's limited design, I am less able to draw direct lines between elements of the Punctuated Equilibrium theory and my results. Nonetheless, statements from several testimonies suggest some alignment. Punctuated Equilibrium is useful in explaining dramatic policy shifts by emphasizing agenda setting and issue definition elements. The data demonstrate that stakeholders spoke clearly and loudly: I interpret these actions as an effort to influence and shape the Delta Vision agenda. In addition, the weak correlations between several Aggregated Variables suggest conditions that inhibit the free-rider problem. Clearly, many of the testimonies acknowledge that everyone will suffer if "alternative rules" to manage the Delta are not implemented (Ostrom, 1990.) Less transparent is how much influence the change in venue (from the CALFED

collaborative approach to the top down macro political institutional level approach) had on stakeholder opinions. Exploration of that question is beyond the scope of this study.

Explanatory Elements and Contingent Factors

In Chapter 2, I describe several overlapping elements of the Multiple Streams, the Punctuated Equilibrium, and the Institutional Rational Choice theories. Following is a discussion of my results in light of the policy entrepreneur and agenda setting elements and the six contingent factors presented in Chapter 2.

Explanatory Elements

As outlined above, I find evidence that stakeholders acted consistent with Kingdon's definition of policy entrepreneurs; due to the limited scope of this study, however, I was unable to measure stakeholder influence beyond the submittal of written testimony. Many stakeholders, especially those who are politically connected, utilize alternative venues to reinforce their messages. A review of the Bay Delta Conservation Plan website, for example, reveals several common themes and an almost identical cast of actors. Two stakeholder groups—sports fishers and members of the environmental community—recognized the importance of developing and working in coalitions and submitted testimony under a collective banner (Mintrom & Vergari, 1996.)

Contingent Factors

I identified six Contingent Factors (focusing events, problem ambiguity, framing, venues of policy action, issue salience, and policy image) and found explanatory value in each. Three factors—venues of policy action, issue salience, and policy image—are intuitive so I dispense with them first. Executive Order S-17-06 moved the Delta

discourse to a new policy venue. Baumgartner & Jones (1991) hold that policy change agents will look for friendlier venues when the stakes are high. This is certainly true in the Delta. The emergence of several concurrent Delta centric policy processes suggests that key stakeholders have both the will and the ability to control the policy environment. Whether S-17-06 put some or all stakeholders in a better position is a question for future study. I found close connections between issue salience and policy image in the context of this study. Netjes (2007) contends that an issue becomes salient when stakeholders hold numerous opinions. I detected variation in stakeholder opinions; however, due to the narrow scope of this study I am unable to draw conclusions beyond that observation.

Focusing events can produce consensus where none was before. Levee failures and seismic threats, examples of focusing events, are explicit in Delta Vision. The literature parses focusing events into two categories: triggering events and tipping events. A clear line between the two did not materialize in this study. Delta interests have contended with levee failure and seismic threats for generations. The Blue Ribbon Task Force held its first meeting in March 2007; by August, court-mandated changes in water delivery practices were in effect. Additional research could determine if these events acted as triggering or tipping points.

The data suggest that problem ambiguity is present in the Delta Vision process. CALFED generated volumes of information but failed to resolve any significant issues or to develop a clear statement of the problem. This is the hallmark of problem ambiguity (Zahariadis, 1995.) I posit that this condition advantaged key stakeholders because it allowed them to frame issues in ways that suggested a crisis was imminent. When a crisis

is looming, inaction is an unacceptable option (Henig, 2008.) The urgent pace of the Delta Vision process acted as a signal to stakeholders and Delta residents that something had to be done soon. Several testimonies expressed the same urgency.

Suggestions for Future Research

Expansion of this study would answer several questions raised in the course of this work. A follow up to this study could evaluate how congruent the Delta Vision document is with those issues. One way to test for congruence would be to assess how well Delta Vision heard and responded to stakeholder needs. For example, my research revealed several salient issue areas. Additional research could compare those issue areas with the early and final versions of the Delta Vision plan documents to test how well stakeholders fared.

Policy Implications

The Delta Vision process created several venues to accommodate stakeholder involvement, yet a comparatively small group of individuals and organizations chose to participate. Explanations for this lack of engagement include Delta Vision's accelerated timeline, the possibility that Delta stakeholders suffer from "participation fatigue," the weight of the Delta's complexity, or simply that Delta stakeholders distrust the process. However, given the high stakes involved, is it enough to simply open the doors and wait? Achieving the Governor's goal to create a sustainable Delta will require the agreement and cooperation of hundreds of cooperators. Delta Vision, along with other related processes like the Bay Delta Conservation, will need to find ways to encourage more stakeholder participation if these efforts are to succeed.

APPENDIX A

DELTA VISION STAKEHOLDER TESTIMONY CODE FORM					
Speaker: _____(Doc#) _____ Hearing: _____					
Affiliation: _____(code)[4] _____ Comment date: _____(YR/MO/DAY)					
	1	2	3	4	
Problem Domains	Not import	Low import	Mod Import	Very import	Loudness[5]
1. Continued threat of flood					
a. Aging Levees					
b. Inadequate Floodplain management					
c. Climate change					
d. Inadequate storage					
e. Building in flood prone areas					
2. Maintaining a reliable water supply system					
a. Droughts					
b. Inadequate conveyance facility					
c. Inadequate Storage					
d. Peripheral Canal					
e. Seismic threats					
f. Salt water intrusion					
g. Water conservation Urban					
h. Water conservation Ag					
i. Water transfers					
j. Growing demand					
3. Sustaining a place based vision of the Delta					
a. Delta legacy communities					
b. Delta a statewide resource					
c. Local perspective					
d. Public safety					
e. Inappropriate urbanization					
f. Unique legal status for					

[4] Public = 1, Water Contractors = 2, Environmental = 3, Local Gov't = 4, State Gov't = 5, Fed Gov't = 6, Experts/scientists = 7, Sport Fishers = 8, Environmental Justice = 9, Business/Development = 10, Agriculture = 11

[5] Loudness is the number of times an issue is mentioned in the same testimony

Delta					
g. Tourism					
h. Recreation					
4. Continued degradation of water quality and fisheries resources					
a. Drought					
b. Entrainment					
c. Inadequate freshwater flows					
d. Municipal water pollution					
e. Ag water pollution					
f. Pollution in general					
g. Poor interagency coordination					
h. Increased demand on resources					
i. Invasive species (plant and/or animal)					
j. Amount of water exported					
k. Amount of water diverted					
l. Fish Screening needed for Ag					
m. Fish Screening needed for Municipal					
n. Dredging					
o. Inefficient use of water: Ag					
p. Inefficient use of water: Urban					
q. Inefficient use of water: Operators					
5. Economic inefficiency and losses					
a. Beneficiary pays principle					
b. Cost to society					
c. More economic growth is needed					
d. Less economic growth is needed					
e. Continue Ag uses					
6. Effective Delta Vision governance					
a. Spending authority					
b. Land use authority					
c. Resilient institutions					
d. Upholding constitutional principles[6]					

[6] Reasonable use, public trust, area of origin

e. Adaptable policies					
f. Secure funding					
g. Adaptable institutions					
h. Control over water exports					
i. Need more federal oversight					
j. Need more state oversight					
k. Need more local oversight					
l. Science advisors					
m. New/Independent government					
7. Alternative decision space	Yes = 1	Yes = 1			
a. Problems					
b. Solutions					

APPENDIX B

Coding Guidelines

The following guidelines set out coding protocols specific to this study. Coders will adhere to these instructions and if necessary, resolve discrepancies in the follow up reconciliation process described below. The purpose of this study is to capture which issues Delta Vision stakeholders said were most important in written comments submitted between September 11, 2006 and January 31, 2008.

Coders will read each statement or testimony and identify codeable statements that correspond to the issue categories described in the Code Form. Code forms will be collect and compared for inconsistencies. Coders will convene a reconciliation meeting to clarify ambiguous or unclear coding. The coding reconciliation process may result in revisions or additions to the Specific Coding Guidelines below.

Coding sessions are limited to four hours. Coding is limited to a maximum of eight hours in one day. Coders will break every ninety minutes for ten minutes and will refrain from the use of cell phones, pagers, or other devices that are distracting. Coders may not consult one another or others during coding sessions.

Coding Frame

This Code Form catalogues statements that are consistent with major themes articulated in the Twelve Delta Vision Recommendations adopted January 17, 2008. Problem themes are categorized according to problem areas: continued threat of flood, maintaining a reliable water supply system, sustaining a place based vision of the Delta, continued degradation of water quality and fisheries resources, economic inefficiency and losses, effective Delta governance, and alternative decision space.

General Coding Guidelines

1. *Codeable statements are phrases, clauses, sentences, or passages that reflect language similar to the categories on the code form.*
2. *Codeable statements are more than a passing reference to an issue: codeable statements contain substantive language that indicates the stakeholder's interest/preference/concern.*
3. *Be conservation in deciding which statements to code.*
4. *Code statements on a scale; choose the description that is closest to the statement.*
5. *Be conservative in assigning code values (ends points are extremes).*
6. *Missing or no data = zero.*
7. *In the margin, record the location of each codeable statement on the source document. For example, a statement from page 6, paragraph 2, line 5 of the text, would be referenced as 6:2:5. If the source document contains line numbers, record only page and line number.*

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