Legislative Barriers to Wetland Policy Reform in California

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Abstract

The State of California has experienced the most significant loss of wetlands in the United States. An increase in land conversion for agriculture and urban development across the state over the last 200 years has resulted in a loss of 90 percent of its wetlands, from 5 million to 450,000 acres (California, 2012). Previous research shows the lack of wetland protection measures and wetland drainage incentives have contributed to this extreme loss.

With no national wetland conservation act, protection of these areas has been limited to single issue approaches based on water quality, open space, or endangered species, rather than with a holistic approach. Only recently, since the 1970's, have scientists and policy makers recognized the invaluable characteristics of wetlands. California, despite being one of the most environmentally progressive states, has yet to chapter a law that assigns statewide responsibility for wetland conservation.

This project investigates legislative barriers to formalized wetland protection using the 230 legislative bills introduced between 2000 and 2012 to identify trends, shortfalls, and outcomes of California wetland-related bills. This multi-method study relies on textual assessment of bill content and statistical measures of bill survivability through the legislative process. Two phases were utilized in this research design to track and analyze bill content, legislative procedures, and influential monetary characteristics.

Approximately 134 bills failed the legislative process of the 230 sample size. The legislative barriers identified include overly specific bill topics, in program areas or conservation efforts, lack of wetlands present in represented districts when carrying wetland-related legislation during re-election, lack of partisan co-authorships, lack of committee or multiple co-author support, lack of increased monetary support, and lack of in significant number of monetary contributors.

In response to these legislative barriers, five recommendations were provided in an attempt to navigate these barriers. The recommendations for legislators, policy analysts and advocates include increased partisan support on legislation, increased wetlands representation, increased monetary finance support and quantity, keen choice of bill topic and correlated efforts during re-election for representatives with wetland present in their districts.

In identifying legislative barriers to wetland policies, the further recommendations in navigating these barriers can be applied in creating wetland-related policies that can survive the legislative decision-making process and influence wetland conservation and protection.

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Introduction

Wetlands[1] are one of the most unique ecosystem types found on the planet. Wetlands are found on every continent, except Antarctica, and in every climate from tropics to tundra (Reading, 2010). These wet areas serve as habitat for rare fish and wildlife, possess water quality filtration systems, act as flood and erosion control, and provide humans with aesthetic and recreational activities (California Wetlands Information System, 2012). These wet areas are vital environments to both human health and wildlife survival and are in need of conservation (Keddy, 2009 pp. 39).

The State of California has had the most significant loss of wetlands in the United States. Overall, the United States had over 220 million acres of wetlands at founding, and in 1997 only 105.5 million acres of wetlands remained: a calculated wetland loss of 54 percent nationally (Environmental Protection Agency, 2012). More specifically, an increase in agricultural land conversion and urban development across California over the last 200 years has resulted in 90 percent of its wetlands lost, decreasing from 5 million acres to only 450,000 acres (California Wetlands Information System, 2012). Various factors have contributed to the extreme loss of wetlands in California including the "…lack of implementation and enforcement of wetland protection measures and elimination of incentives for wetland drainage" (Environmental Protection Agency, 2012).

In the 1970s, the nation experienced a social and political change in how individuals and the government viewed the environment. This environmental movement began with citizens mobilizing against large-scale environmental disasters and destruction. The conversion and filling of wetland areas were halted and recognition of the invaluable functions of these natural systems were known not only the scientists studying these areas but to the public through

[1] Wetlands have three general indicators that narrowly define them as a type of ecosystem found in nature. The three indicators include "the presence of water, either at the surface or within the root zone", the existence of "unique soil conditions that differ from adjacent uplands", and the occurrence of "biota such as vegetation adapted to the wet conditions" (Mitsch & Gosselink, 2007, pp. 27). These indicators are often called the three "h's", abbreviated for hydrology, hydric soils, and hydrophytic vegetation. Hydrology is the presence of an inundated area of water, whether it is at the surface or roots and whether it is annually or seasonally present. The USDA's Natural Resources Conservation Service defines hydric soils as "soils that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions" (Mitsch & Gosselink, 2007, pp.164). Hydrophytic means water loving, where plants are able to physically tolerate intense flooding and store large amounts of water within plant cells. These three indicators identify which wetland areas are in need of conservation.

executive orders and regulation from multiple federal agencies. Yet with no single wetland conservation act, preserving wetland areas as whole has become a piecemeal approach rather than looking at the vitality of the ecosystem and the relationship of humans to their environment through a more holistic ecosystem conservation approach (Berkes, 2000, p. 1252).

In looking at ecosystem conservation holistically, several universities and institutes have conducted studies using specific variables for measurement of land conservation and planning approaches. In the 2012 Environmental Performance Index published through the Yale Center for Environmental Law and Policy, the United States is ranked the 49th nation in the world based on 22 performance indicators and 10 policy categories related to environmental health and ecosystem vitality (See Appendix A) (Environmental Performance Index, 2012). In August 2001, the Resource Renewal Institute in California published a report called "The State of the States: Assessing the Capacity of States to Achieve Sustainable Development through Green Planning". This report looks at all 50 states in their sustainable policy and planning approaches and identifies key innovative aspects of environmental policy to rank each state (See Appendix A). California was ranked twelfth in the nation with strong air pollution standards, climate action plans, pollution prevention reporting requirements, and renewable electricity funds (Siy, Koziol, & Rollins, 2001). Where California has made strides in implementing environmentally protective policies in other areas of renewal and efficiency, the loss of wetland ecosystems continues today.

The intent of this research is to investigate the legislative bills[2] related to wetlands from the last twelve years (2000 to 2012) to identify why these bills are not being chaptered into law, focusing on the barriers in California's legislative process where wetland policy fails. With 230 potential wetland-related bills, the time frame of 2000 to 2012 provides an ample and robust sample of wetland-related bills for in-depth study. This research analyzes bill death by mapping bills through the legislative process while tracking information on sponsor and content. In utilizing the bill content and analysis output from the California Legislative Information public website, I analyzed all wetland-related bills over the past twelve years to see why they failed to be chaptered into law.

[2] Both Assembly bills (AB) and Senate bills (SB) will be utilized for the proposed research. A small number of Assembly and Senate resolutions were identified in the data gathered but because they do not follow the typical legislative process for bills. They were therefore excluded from the data to be analyzed.

Historical Overview of Wetlands

Since the establishment of the United States, wetlands have been destroyed and demolished throughout most of the nation's history. Wetlands were seen as swamp-like areas, "depicted as sinister and forbidding" due to their unknown economic, aesthetic, and biologically diverse values (Mitsch & Gosselink, 2007, pp.15). During the early expansion of our nation, the federal government passed multiple laws and implemented programs that incentivized the destruction of wetland areas. The Swamp Land Act of 1849 was established to formalize the destruction of wetland areas in the Louisiana Delta and Mississippi River basin for controlling floods. The act was extended to 14 other states including California in 1850 (Mitsch & Gosselink, 2007, pp.290). The Department of Agriculture established additional programs, notably the Agricultural Conservation Program in 1940 that eliminated approximately 57 million acres of wetlands in the United States by filling these areas with soil for the purpose of creating agricultural lands.

Starting in the 1970s, the growing environmental movement changed social and political attitudes towards wetlands moving from destruction of these areas to conservation. In 1970, the United States Fish and Wildlife Service (USFWS) adopted a position that supported wetland preservation by creating an official definition, defining what a wetland is and what characteristics are important enough to conserve (as noted in footnote 1) (Mitsch & Gosselink, 2007, pp.35). The USFWS, capitalizing on support from the scientific community, was the first federal agency to champion preservation of wetlands.

The nation's environmental social movement began in 1970 when the public saw how horrifically human actions were impacting the environment, including oil spills in rivers and pesticides killing wildlife. This movement was the catalyst for the first federal environmental regulations passed in the United States, including National Environmental Policy Act (NEPA), the Clean Air Act (CAA), and the Clean Water Act (CWA). Wetlands were included in the types of environments that needed protection. President Jimmy Carter signed Executive Order 11990 that required federal agencies to take steps to avoid impacts to wetlands when possible (Natural Resources Conservation Service, 2012). In 1989, President George H.W. Bush established the national policy of "no-net-loss" of wetlands, where the creation, restoration or mitigation of

wetland areas needed to replace destroyed wetlands (Natural Resources Conservation Service, 2012).

This philosophical shift encouraged federal agencies to take specific action in regulating wetlands. In 1970, under the CWA, the Army Corps of Engineers became the regulatory body to oversee and permit dredging activities in an attempt to reduce harm to wetlands when constructing levees, bridges, and dams (Mitsch & Gosselink, 2007, pp.38). The USFWS continued to scientifically study species and their protection in wetland areas, and was mandated by Congress in 1986 to report every ten years the status and trends of wetland areas (Mitsch & Gosselink, 2007, pp.484). In 1988, a federally sponsored *National Wetlands Policy Forum* helped educate the public and gave rise to more political awareness about wetland loss (Mitsch & Gosselink, 2007, pp.21).

In looking at California's progress in increasing environmental protection through government action, wetlands are still piecemeal protected with statewide policies passed and regulatory bodies created to expand on the conservation efforts of our federal government. In California today, there are many agencies involved in the piece-meal approach to wetland management. The Army Corps administers the CWA Section 404 permits for dredging or filling of wetlands. Under the California Porter-Cologne Water Quality Control Act, the State Water Resources Control Board administers the CWA Section 401 certification for water quality. The California Department of Fish and Game requires permitting in riparian areas, while the Natural Resources Conservation Service works with agricultural landowners in preserving wetlands. The California Coastal Commission approves wetlands in the designated coastal zone and the Fish and Wildlife Service permits for threatened and endangered species protection. Lastly, overall environmental review is conducted for any type of project that may damage wetland areas through the National Environmental Policy Act (NEPA) or the California Environmental Quality Act (CEQA) (California Wetland Information System, 2012). The intertwined state and federal permitting and regulating system addresses each environmental characteristic of a wetland almost independently, breaking down the conservation of these areas.

In looking to further understand the policy and regulations of these continually damaged areas, greater understanding of the types of wetland-related bills proposed over the last 12 years and the legislative barriers faced help to clarify what is preventing the state of California from conserving these dwindling beneficial ecosystems.

The Legislative Process

Understanding California's legislative process and the barriers within that process will help understand why wetland conservation bills are not chaptered through the Legislature. State legislators must balance their constituent interest, pressure from outside interest groups, and their own ideology, preferences, and party affiliation (Morton, 1991). These influences show how legislators may face certain barriers in the process of voting for specific types of legislation. This research studies legislative barriers to environmental policies related to wetland conservation. These relationships must be explored to fully understand why certain barriers exist and how they might be removed.

The California State Legislature, as the principle lawmaking power in the state of California, proposes thousands of potential bills to become law every year (California State Legislature, 2012). Appendix B contains an extended bill step-by-step process through the Legislature. Eighty Assembly and forty Senate members are tasked with discussing, amending, and collaborating on the approximately 6,000 bill ideas that are proposed in the standard two-year legislative session (California State Legislature, 2012). During the 2009-2010 legislative session, only 1,385 out of 6,709, approximately 20.64 percent, senate and assembly bills were chaptered into law (Secretary of State, 2012). Despite this relatively low chaptering rate, the legislative process allows for representation across the state in addressing pertinent issues from both the constituency and the leaders in the state of California to be addressed (Jewell, 1983, p.303). Both Democratic and Republican representatives have addressed and are currently addressing environmental policy reform through legislative action, including introducing bills related to wetlands.

For this research, eleven general steps have been determined in characterizing the legislative process (see Figure 1). The California state legislative process takes an idea and formulates it into a bill to propose and pass over a two-year session within two houses, the Senate and the Assembly, where each body respectively consists of 40 Senators and 80 Assembly Members (California State Legislature, 2012). The first step is generating or receiving an idea from a constituent to develop as the source of a bill. A Senator or Assembly Member approves an idea to author as a bill (California State Legislature, 2012). This process allows for elected officials to

represent not only the concerns of their constituency, which reflects the type of issues found in their district and geographic region.

The second step in the legislative process is to have the legislator approve the idea with the Legislative Counsel, where it is drafted into an actual bill. After the Legislative Counsel approves the initial bill language, the Legislator is allowed to introduce the bill, the third step of the process. If a Senator is carrying a bill, it must first be introduced to the Senate; and if an Assembly Member is the author of a bill, then the bill must be introduced in the Assembly. With the introduction of the bill, the name, author, and descriptive title of the bill are read in what is called the first reading, after which each bill must wait 30 days to be acted upon (California State Legislature, 2012).

The fourth step in the process is to have the bill go to the Rules Committee in the house of origin; there it is assigned to the most appropriate subject policy committee or committees for its first evaluation and hearing. The author of the bill presents it to the committee and then testimony can be heard in support or in opposition of the bill. The respective committees vote on the bill and either pass the bill with a majority vote, pass the bill with appropriate amendments or reject the bill.

After the bill passes its assigned committees, the fifth step is a second and third reading in the house of origin. The author introduces the bill again, the members can discuss the bill and then a roll call vote is cast on approving the bill from that house. Bills that take effect immediately require a two-thirds super majority to pass. All other bills that take effect at the end of the legislative session require a simple majority. If a house rejects bills, then the author may ask for reconsideration for another vote on the bill. Common courtesy and practice show that all members typically approve the reconsideration but can still cast their similar votes as the previous roll call (California State Legislature, 2012).

These steps are then repeated in the non-originating house. If a bill is amended in the opposite house of origin, then a resolution of differences, or agreement on the amendments to the bill is

drafted. This is typically done in a two-house conference committee to resolve these differences. If a resolution is met, then the bill goes back to both houses for a final vote.

The final step of the legislative process is to have the Governor sign the bill into law, allow it to become law without his or her signature, or veto the bill. Should the bill be vetoed, his/her vote can be overridden by a two-thirds vote of both houses. Once a bill is signed into law, the Secretary of State chapters the bill into California's law code. Most bills go into effect on the first day of January the following year (California State Legislature, 2012).

It is most important to understand California's legislative process and the barriers within that process to further address where wetland conservation legislation fails and why specific barriers exist so as to dissolve these barriers from the process.

Legislative Process Diagram

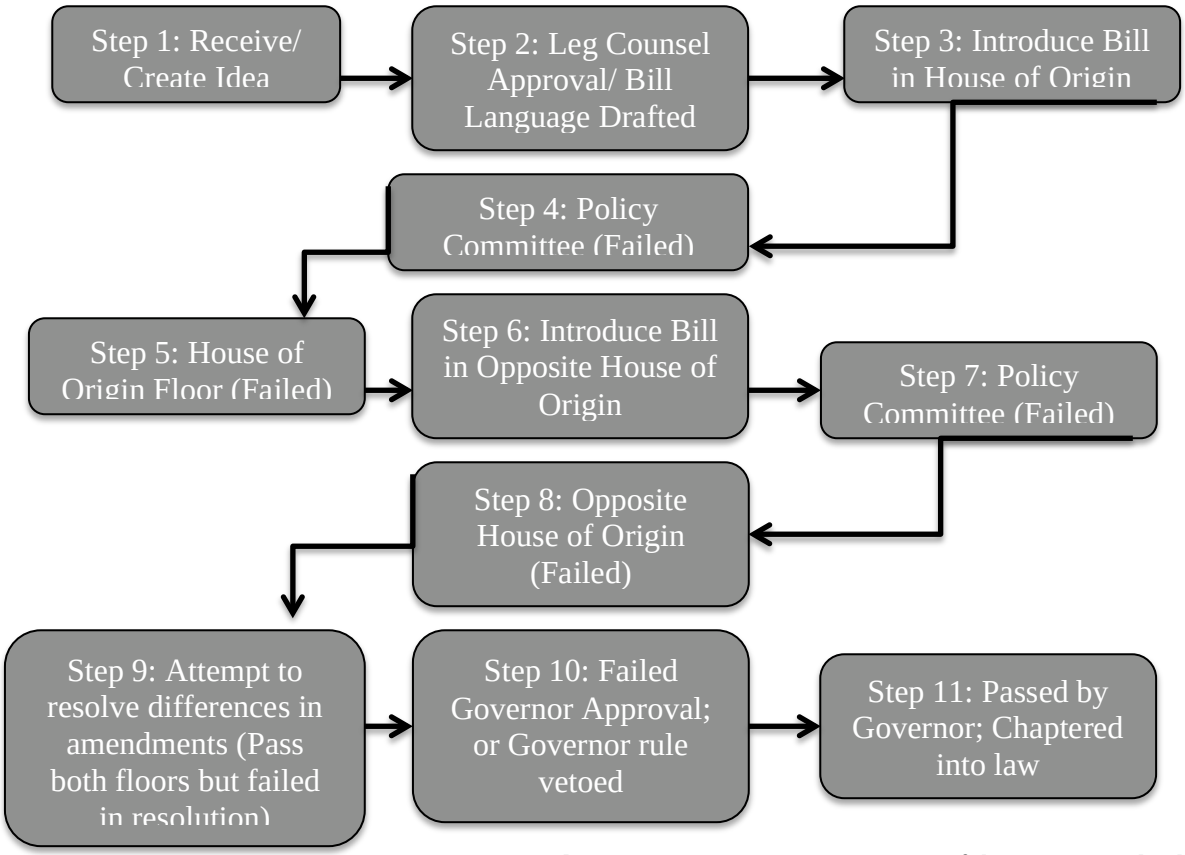

Figure 1. Legislative Process Diagram. Diagram of the 11 steps and a description of the legislative action occurring at each respective step that were used to understand and code the California legislative process. A full diagram of the legislative process is in Appendix B.

Research Design and Methodology

This multi-method study relies on textual assessment of legislative bill content and statistical measures of bill survivability specific to wetland conservation. This research aims to explain why the legislative process has been unable to enact statewide wetland protection. The research then provides recommendations regarding how to navigate legislative barriers in protecting California's remaining wetlands.

To better understand the barriers preventing wetland policies from passing in the California legislature, I analyze 230 bills[3] related to wetlands through a multi-method, two-phased analysis. The first phase assesses bill content and procedure and the second phase utilizes the most representative bills to look at monetary influence of bill status. This allows for a cluster analysis method in phase one and a representative modeling study in phase two.

Phase One: Bill Content Analysis

Phase one utilizes the public legislative database, California Legislative Information System[4], to search the last 12 years of legislative bills based on the key word search "wetlands". Approximately 25 to 40 bills related to the keyword search for "wetlands" in the California Legislative Information System Database were introduced in every two-year session for a total sample of 230 bills. This provides a large enough sample size to look for similarities and differences in types of legislative barriers that are currently facing wetland-related bills.

Author and co-author party affiliation, pending re-election, bill topic, and bill survivability data was gathered through the California Legislative Information System output. When more than one co-author existed, the co-author was determined by choosing the member who was opposite in party with wetlands in their district and who was seeking re-election, under the assumption that bi-partisan co-authorship, wetland representation, and re-election campaigns are factors that influence bill success. If there were three or more co-authors, they were categorized as a group with differing characteristics, when identifying their party affiliation, wetland presence, and re-election. When many co-authors existed, each co-author's characteristics were not applied

[3] The 230 bills and all respective data collected are available upon request to the researcher.
[4] The California Legislative Information System is a public comprehensive tool utilized by legislative staff and the public to search, comprehend, and analyze legislative bills.

individually, but labeled, characteristically, as a group. The presence of wetlands within the author and co-author's districts was determined based on the California Wetland Portal website interactive wetland mapping system[5], by overlaying the Senate and Assembly districts[6] on these maps to determine wetland presence in each respective district, as seen in Appendix D. After gathering all of the bills under the keyword search, the data was categorized and coded. Each bill was coded in a comprehensive excel database, later imported into IMB SPSS software for further analysis in grouping the data into similar clusters (See Appendix C).

The key data categories (denoted with an (*) in Appendix C) which were analyzed include author and co-author party affiliation and pending re-election, presence of wetlands within a representative's district, bill topic, and bill survivability through the legislative process. These key areas can be viewed as potential barriers in the legislative process. Researchers who have studied the legislative process at the congressional level have found that "legislative success is also influenced by party leaders" (Hasecke & Mycoff, 2007, p. 607) and that "party loyalty is rewarded with legislative success and that loyalty [is] expressed through voting support" (Hasecke & Mycoff, 2007, p. 608). This is important in understanding why party affiliation of bill authors and co-authors is influential to bill survivability. Party affiliation is a characteristics within this study when identifying members carrying wetland-related bills. As our current Legislature has a majority of democratic members, identifying the partisan and bi-partisan relationships in carrying wetland bills, has provided evidence for which bills faced barriers in the process. Re-election of legislative members is another important characteristic as well. Researchers have found that "members who consistently abandon the constituency in favor of the party position are more likely to face a stiff challenge during re-election, threatening the party's control of the seat" (Hasecke & Mycoff, 2007, p. 610). Therefore, should a legislative member support the constituency that is in favor of their party position, re-election is likely to be less challenging. This creates a potential legislative barrier because legislators may manipulate

[5] The California Wetland Portal shows current wetland projects and nationally recognized wetlands. The California Environmental Resource Evaluation System (CERES) managed by the California Resource Agency provides the public access to wetland mapping tools and current regulations in the state of California. The website is currently experiencing an update in information so the California Wetland Portal website was utilized as an alternative.

[6] The California Legislature has utilized the same districts from the 2000 session to the 2012 session. The districts were recently re-mapped by the California Citizen's Redistricting Commission, a bi-partisan commission elected in 2010, assigned to re-determine the California Assembly and Senate districts, as well as the House of Representatives and the Board of Equalization districts for the next decade (California Citizen's Redistricting Commission, 2011).

the system by carrying favorable legislation to the constituency, specifically in their re-election years to help carry them into the next legislative term, without true intentions for carrying those bills. In identifying which legislative members are running for re-election, potential barriers on wetland-related bills are assessed.

Both categories of bill topic and presence of wetlands in the member's district also contribute to why wetland bills are not surviving the legislative process. Researchers have found that legislative members who carry environmental policy often address geographic locations, where there is an interface between the environment and urbanized human impact (Oppenheimer & Miller, 1970, p.77). Consequently, when members are carrying wetland legislation, they are likely addressing wetlands because they are present in their district geography. In understanding an author's regional make up of their district, the likelihood of a member carrying wetland-related bills and how that affects bill survivability through the process is analyzed.

I use the data collected in phase one to cluster information as indicators, to understand if there are patterns of legislative barriers. By analyzing the codified data, I was able to cluster or group the data based on indicators or characteristics, through the IBM SPSS software. My cluster characteristics are party affiliation of the bill author, presence of wetlands in the bill author's district, if the author is up for re-election, party affiliation of the co-author, presence of wetlands in the co-author's district, if the co-author is up for re-election, bill topic, and where the bill ends in the legislative process. The SPSS software utilized the eight characteristics and determined which bills had the most similar characteristics to create the clusters. I further compared these eight key indicators to find patterns among the sample of bills. From there, I chose a set of representative bills, which served as the basis for phase two of the analysis.

Phase Two: Representative Case Studies of Monetary Influence

Phase two of the analysis will serve as a representative bill case study on legislative member campaign finance. Researchers have found that lobbyists and lobbying organizations need regulations to limit "bribery and vote-buying" (Newmark, 2005, p. 182). In tracking the financial contributions on members and bill support, evidence for "lobbying" buy-out efforts were analyzed. I selected the most representative bill from each cluster using the Pearson's R

correlation coefficient, which is the statistical calculation measuring magnitude and distance between variables on an interval of all data. After the eight clusters were determined in Phase One, I compared all of the bill cases to the characteristics found in each cluster. Through SPSS software, I was able to calculate which of the bill cases were closest to each cluster's characteristics, by identifying the highest Pearson's R correlation coefficient of all of the bills. If there were two identical Pearson's R coefficients, both were considered representative cases for the cluster. After determining which representative bills correlate with each cluster, I was able to research on the Secretary of State campaign finance website, the mean monetary contribution for bill authors during the legislative session in which they carried the representative case. In identifying the mean monetary contribution, specific contributors were further identified (based on researcher determination of likeliness to support wetland-related bills) to analyze the relationship between monetary contributions from specific contributors and the representative bill cases. The purpose of Phase Two investigates the financial influence on legislative bills via a series of comparative case studies.

The goal of this study is to understand what the legislative barriers are to wetland conservation bills so as to advise how to navigate around those barriers increasing protection for these vital, natural ecosystems. Phase One contributes an understanding of the legislative member and bill content attributes that affect bill passage. Phase Two contributes an understanding of how outside monetary sources influence legislative members, which consequently affects the types of bills carried and as well as bill survivability**.**

Analysis of Legislative Barriers to Wetland-Related Policies

The following analysis describes the results of the research design on legislative barriers to wetland policies over the past twelve years. The sample of legislative bills were sorted and clustered based on author and co-author's party affiliation, re-election status, presence of wetlands in their districts, bill topic, and bill status in the legislative process. All significant statistical output and histograms of the overall cluster is summarized in Appendix E, where colors correlate to the categories of indicators. As shown in Figure 2, of the 230 wetland-related bills found through the keyword search, the majority of bills were authored by Democratic members (172) followed by Republican members (33) and committees (25). There were no Independent party-affiliated members as bill authors in this sample.

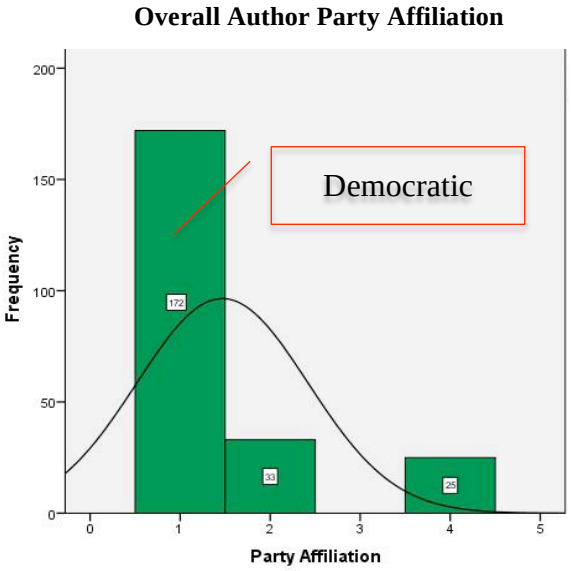

Figure 2. Overall Author Party Affiliation. Overall, bill author party affiliation resulted in 172 Democratic authors, 33 Republican authors, 0 Independent authors, and 25 committee authors.

Of the sample, the majority of bill authors had wetlands present in their districts, as shown in Figure 3. If the author of a bill was a committee, the presence of wetlands was determined as "not applicable", due to the diversity in members and district representation serving on the respective committees. This shows that not all of the Democratic bill authors (172) had wetlands present in their district (only 134 had wetlands present in their district). Overall the majority of bill authors did have wetlands in their district.

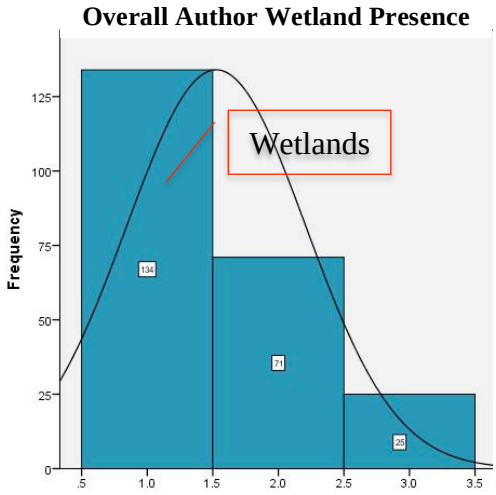

Figure 3. Overall Author Wetland Presence. Of the 230 sample bills, 134 were authored by a legislator with a wetland in his/her district, 71 did not have wetlands in their district, and 25 were committee authors where this variable was not applicable.

Overall Author Re-election Status

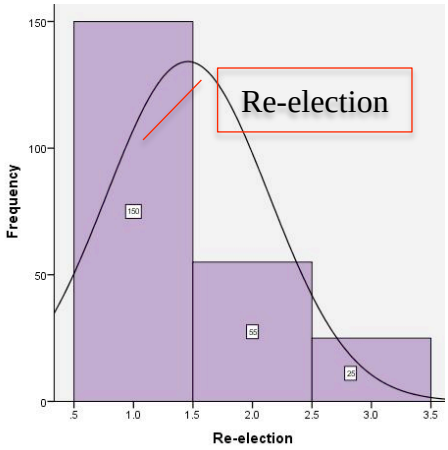

Figure 4. Overall Author Re-election Status. Author re-election resulted in 150 authors up for re-election, 55 authors not up for re-election, and 25 committee authors where this variable was not applicable.

Overall Co-author Party Affiliation

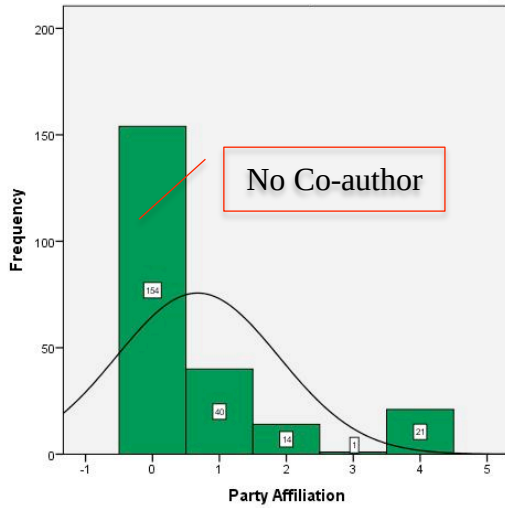

Figure 5. Overall Co-author Party Affiliation. The most common co-author status was no co-author (154), followed by 40 Democratic co-authors, 14 Republican co-authors, 1 Green Party co-author member, and 21 cases that had 3 or more co-authors.

Author's re-election shadowed reveals that bill authors were typically seeking re-election when carrying their wetland-related legislation, shown in Figure 4. Approximately 150 authors were seeking re-election, 55 were not seeking re-election, and 25 were committee authors, where this category is considered "not applicable" to the committee as a whole.

Figure 5 shows that of the 230 bills identified, 154 of the bills did not have co-authors, 40 had Democratic co-authors, 14 had Republican co-authors, one had a Green Party[7], Independent co-author, and 21 had three or more co-authors. If a bill had 3 or more co-authors, determination of which co-author representative would be the single most representative of co-authorship became difficult. Therefore, when there were 3 or more co-authors, I created a new group category, to show that as a group they represent diverse variations in party affiliation, wetland presence, and re-election.

[7] I conducted further research for the single Green Party co-author, Assemblymember Audie Bock, who was elected in 1999 in a special election for the 16th Assembly District (Oakland area) as a Green Party member, but later switched to the Democratic Party in the following year, 2000. If there was a co-author, the majority were Democratic members with wetlands in their district and seeking re-election.

Bill topic was categorically coded (1-24) where each number represented a different bill topic area (See Appendix C). The three most common bill topic areas were wetland-related bills specific to budget, water, and land use or property, as seen in Figure 6.

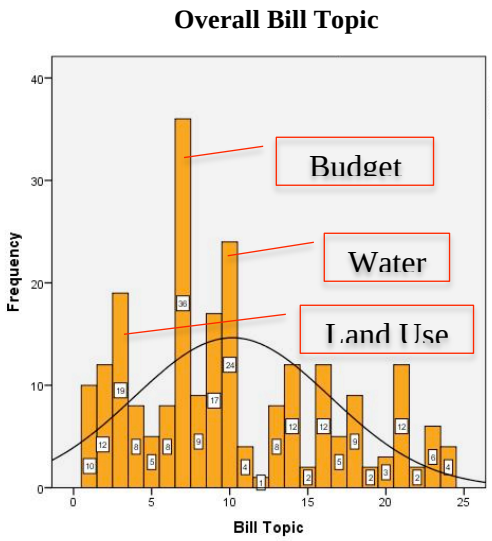

Figure 6. Overall Bill Topic. The most common bill topics were budget (36), water (24), and land use/ property acquisition (19).

Each of the 230 bills analyzed were tracked throughout the legislative process and the end location of each bill was determined to be their bill status. The four most common areas where bills ended in the legislative process included 44 introduced in the House of Origin but failed to move forward to policy committee, 24 failed the House of Origin policy committee, 24 were vetoed by the Governor, after passing both the Senate and the Assembly houses, and 96 bills were chaptered into law. Even though chaptered bills were ranked as the highest total within this category, the overall total of bills that failed the legislative process was 134, as shown in Figure 7.

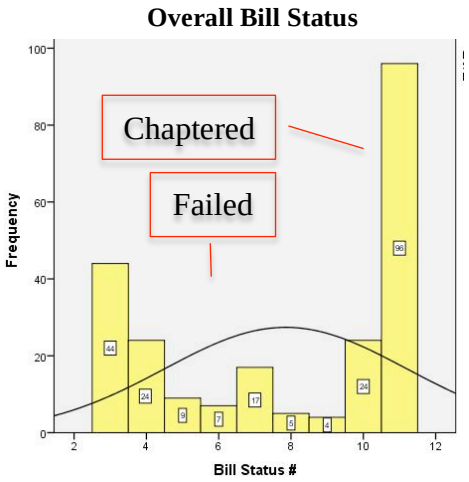

Figure 7. Overall Bill Status. A total of 134 bills did not pass through the legislative process. 96 bills were chaptered into law.

The overall data findings show that Democratic authors with wetlands present in their district seeking re-election typically carried wetland legislation. Their bills were most typically related to budget, water or land use issues and the majority of the bills did not pass the Legislature. To further analyze this data, the cluster analysis section will provide insight and significance on this study.

Cluster Profile Analyses

The following analysis outlines how the 230 bills were clustered into eight groups, where each cluster shares similar categorical characteristics based on party affiliation, re-election, wetland presence, bill topic, and bill status. It is significant to note that two of the eight clusters are bi-modal based on bill topic, creating ten total clusters. The following display shows the 230 bills of the sample and the statistical output, called a dendrogram, of the bills after being grouped into each cluster. The readability of bill number, along the x-axis of the display is not necessary in interpreting this graph. The purpose of this graph is to show the range of bills within each cluster and the output from the SPSS software of how the clusters where categorized and grouped. As the dendrogram stems down, eight main clusters were identifiable. Color representation on this diagram is simply for differentiating purposes.

Cluster Dendrogram

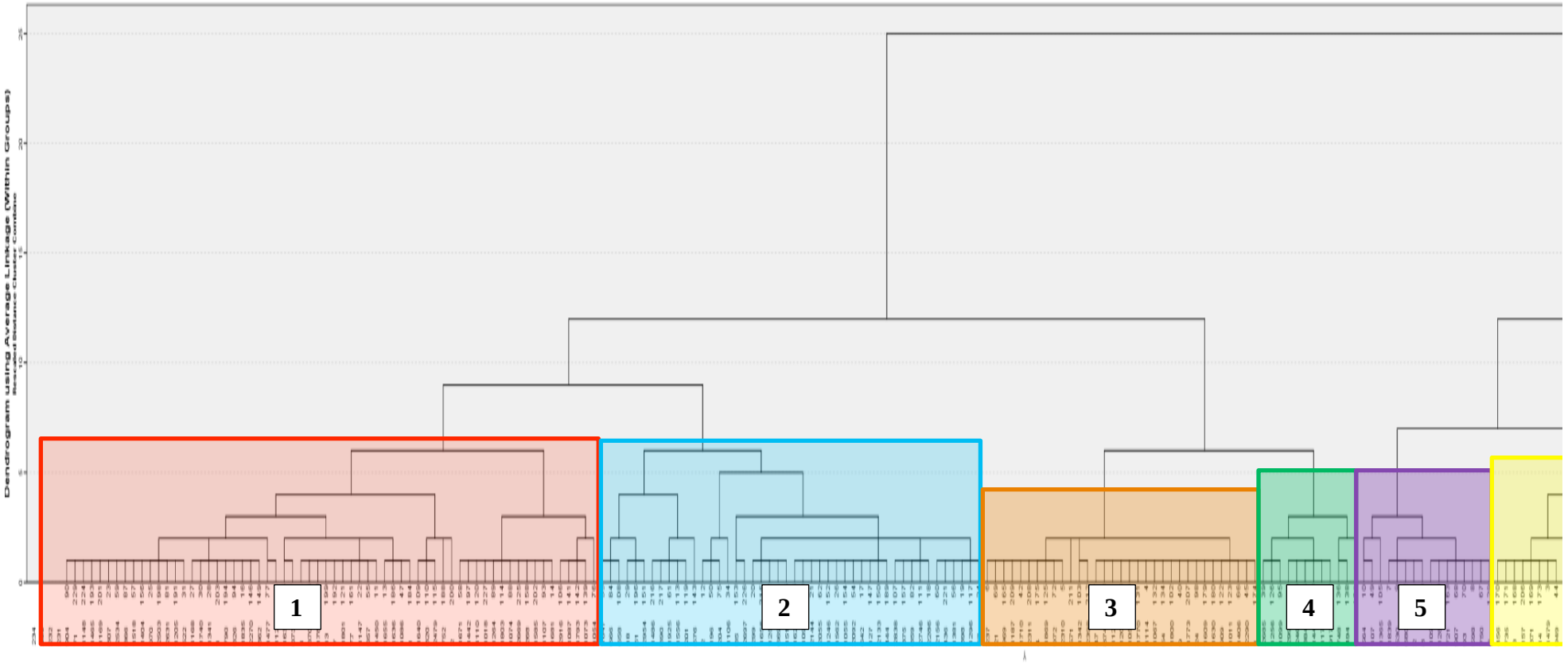

Figure 8. Cluster Dendrogram. The number on the horizontal axis represents bill number. The vertical axis represents a measure of similarity. The closer to the horizont greater their similarity. The 8 clusters of bills that emerge are labeled and highlighted. The purpose of this graph is to show a general diagram of the clusters.

Cluster Comparison

The following two tables summarize the clusters' categorical characteristics. Table One: C Comparison Chart shows the overall comparison of bill topic and bill status for the datas whole and for each cluster. The overall dataset information in Table One is also grap displayed in the previous section. Table Two shows the overall comparison of the charact with the two most common categories for each indicator (i.e. overall Democrats were th common party affiliation for bill author and Republicans were the second most commo affiliation for bill author). The purpose of Table One is to clearly identify each cluster, four of the eight clusters contain bills that failed the legislative process and the other four c contain bills that survived. The purpose of showing Table Two not only provides a summ the results, but also shows the specific categorical data utilized in creating the clusters.

Table 1. Cluster Comparison Chart. The following table shows the summary of the overall data and each c in regards to their highest output for each category. This information shows the basis and reasoning for why bill was placed in their respective group or cluster.

Cluster Comparison	Total Bills	Bill Topic	Total	Bill Status	Total
Overall	230	Budget	36	Failed	134
Cluster 1	64	Budget	21	Chaptered	38
Cluster 2	46	Land Use	14	Chaptered	34
Cluster 3	33	Budget	15	Introduced in the House of Origin; Fails	18
Cluster 4a	12	Wetland Conservation	4	Introduced in the House of Origin; Fails	7
Cluster 4b		Wetland Mitigation			
Cluster 5	16	Safe Drinking Water Act*	9	Introduced in the House of Origin; Fails	5
Cluster 6a	29	Coastal Wetlands	7	Introduced in the House of Origin; Fails	13
Cluster 6b		Delta Program			
Cluster 7	20	Common Interest Development	10	Chaptered	14
Cluster 8	10	Maintenance of Codes	3	Chaptered	8

*The abbreviated Safe Drinking Water Act stands for the Safe Drinking Water, Clean Water, Wate and Flood Protection Bond Act.

In looking at Table Two to compare clusters, the most common characteristics of all clusters includes primarily Democratic authors who are seeking re-election, where the majority of the clusters have bill authors who have wetlands present in their districts. All of the clusters show a similar trend of no co-author. Therefore, based on Table One, the greatest variation between each cluster, based on most common characteristics comes from bill topic and bill status in the legislative process. When looking at these two categories, bill status is clearly divided into four clusters that contain chaptered bills and four clusters where the bills were introduced into their respective House of Origin but failed to move forward to House of Origin Policy Committee, where further discussion, analysis, and voting on bills occur. Bill topic, however, is different in all but two clusters, where budget bills are found in Cluster One: Chaptered Budget Bills and Cluster Three: Introduced Budget Bills in the House of Origin. These two clusters also mimic the overall representation of the data, which also shows budget bills as the most common bill topic. Two of the clusters, four and six, are bi-modal, meaning that they were equally distributed in the most common bill topic category. Cluster Four is broken into two clusters – Cluster Four(a): Introduced Wetland Conservation Bills in the House of Origin and Cluster Four(b): Introduced Wetland Mitigation Bills in the House of Origin. These two topics are the most conceptually direct in physically protecting, enhancing, and creating wetland, whereas bill topics such as budget, relate to wetland preservation through indirect means.

Table Two shows the most common and the second most common categories for each characteristic within each cluster. Looking at the entire sample, the most common categories within bill author characteristics were Democrat authors seeking re-election with wetlands present in their district. There is no differentiation between chaptered and failed bills based on these author characteristics. Due to the fact that this was similar for almost all of the eight, identification of the second most common characteristics help to show what differentiates each cluster. In looking at the second most common characteristics across all clusters, it was typically a Republican author not seeking re-election without wetlands presence in their district. Co-authorship was non-existent in 154 of the bill cases, but if there was a co-author on a bill, she/he was a Democratic member seeking re-election with wetlands present in his/her district. This pattern was identical to the most common bill author characteristics.

In the overall sample, the most common bill topic was budget-related bills followed by the second most common, water-related bills. Budget bills are indirect ways of allocating funding for wetland conservation, rather than direct, implementation and program development in an effort to preserve wetlands. Bill topic had 24 categories, which explains why the quantity of bills within each topic is generally lower than the other characteristics with quantities in the hundreds (i.e. Democratic bill authors sweep the majority with 172 individuals). Lastly and overall, the number of bills that failed in this sample totaled 134. Yet because bill failure can occur in multiple places throughout the legislative process, bills failed when introduced into the House of Origin, after House of Origin Policy Committee, and being vetoed by the Governor. The details of each cluster, as summarized in Table Two, as well as the monetary influences on specific representative cases shall be further described in the Cluster Profile Analysis Sections.

Table 2. In-depth Cluster Comparison Chart. The following table shows the summary of both the primary and secondary highest output data for each category overall greater detail in the logic of why bills were grouped together and the overall formation of the clusters.

In-depth Cluster Comparison	Total Bills	Author						Co-author						
		Party Affiliation	Total	Re-election	Total	Wetlands	Total	Party Affiliation	Total	Re-election	Total	Wetlands	Total	Bill Topic
Overall: All Data	230	Democratic	172	Yes	150	Yes	134	No Co-author	154	--	--	--	--	7 - Budget
		Republican	33	No	55	No	71	Democratic	40	Yes	46	Yes	40	10 - Water
Cluster 1: Chaptered Budget Bills	64	Democratic	39	Yes	29	Yes	37	No Co-author	42	--	--	--	--	7 - Budget
		Committee	17	N/A	17	N/A	17	Democratic	10	Yes	16	Yes	12	10 - Water
Cluster 2: Chaptered Land Use Bills	46	Democratic	37	Yes	34	Yes	37	No Co-author	18	--	--	--	--	3 - Land Use
		Republican	7	No	10	No	7	3+ Co-authors	15	--	--	--	--	2 - Wetland Mitigation
Cluster 3: House of Origin Introduced Budget Bills	33	Democratic	29	Yes	22	Yes	17	No Co-author	29	--	--	--	--	7 - Budget
		Republican	4	No	11	No	16	Democratic	3	No	3	No, Yes	2, 2	10 - Water
Cluster 4a: House of Origin Introduced Wetland Conservation Bills	12	Democratic	9	Yes	10	Yes	7	No Co-author	9	--	--	--	--	1 - Wetland Conservation
Cluster 4b: House of Origin Introduced Wetland Mitigation Bills														2 - Wetland Mitigation
		Republican	3	No	2	No	5	Democratic	3	Yes	2	Yes	3	3 - Land Use
Cluster 5: House of Origin Introduced Safe Drinking Water Act Bills	16	Democratic	15	Yes	13	No	10	No Co-author	11	--	--	--	--	21 - Safe Drinking Water Act**
		Republican	1	Yes	3	Yes	6	Democratic	3	Yes	4	No, Yes	2, 2	23 - Climate Change/Greenhous
Cluster 6a: House of Origin Introduced Coastal Wetlands Bills	29	Democratic	22	Yes	20	Yes	15	No Co-author	25	--	--	--	--	16 - Coastal Wetlands
Cluster 6b: House of Origin Introduced Delta Program Bills														18 - Delta Program
		Republican	6	No	8	No	13	Democratic	4	Yes	4	Yes	4	13 - Water Supply Act***
Cluster 7: Chaptered Common Interest Development Bills	20	Democratic	16	Yes	18	Yes	12	No Co-author	12	--	--	--	--	14 - Common Interest Developn
		Republican	3	No	1	No	7	Democratic	6	Yes	6	Yes	5	16 - Coastal Wetlands
Cluster 8: Chaptered Maintenance of Codes Bills	10	Democratic	5	Yes	4	No, Yes	3, 3	No Co-author	8	--	--	--	--	24 - Maintenance of Codes
		Committee	4	N/A	4	N/A	4	Democratic	2	Yes	2	Yes	2	23, 21 - Climate Change, Safe Dr

* When looking at the overall data, 134 total bills failed to pass the legislative process; of those, the highest failure category was 3 - Introduced in the House of Origin; Failure to Proceed Further (44).

**The abbreviated Safe Drinking Water Act stands for the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act.

*** The abbreviated Drinking Water Supply Act stands for the Safe, Clean, and Reliable Drinking Water Supply Act.

Cluster One Profile: Chaptered Budget Bills

Cluster One contains 64 bills with similar characteristics. The majority of these bills were chaptered wetland-related budget bills primarily carried by Democratic authors with wetlands present in their districts who were seeking re-election. These bills typically had no co-authors.

In looking at the most common categorical data for this cluster, the second most common bill author was a committee. This is the *de facto* practice for legislative budget bills. These types of bills modify the Governor's budget. Thus, they require monetary appropriation, fiscal committee review, and many times need to be expedited through the process to pass during the first fiscal year of the legislative session. Therefore, these bills typically require as much support as possible to pass with not only a majority vote but rather with a 2/3 vote of the Legislature pursuant with the California Constitution Article IV, Section 12(d) (California Constitution, 2012). Frequently, a committee is typically bi-partisan and bi-cameral in representation.

The second most common type of co-authors were Democratic members seeking re-election with wetlands present in their in district. The bill status for this cluster was mostly chaptered bills, but the second highest ranked bill status were bills vetoed by the Governor. In looking at the statistical output for this characteristic, the remaining bill status were (all but one) in legislative steps 6 to 10, which occur after the bill has passed the House of Origin into the opposite chamber. This shows that budget-related bills with Democratic authors seeking re-election with wetlands present in their districts typically have their bills carried further into the opposite house rather than stall or die in the House of Origin. Therefore, Democratic authors with wetlands and seeking re-election, whom if they have a Democratic co-author who also has wetlands and is seeking re-election, is more likely to chapter wetland-related budget bills.

Representative Cases: Monetary Influence

After transposing this cluster, I was able to identifying three bills that were most similar to the characteristics of Cluster One. The first bill was SB 77 carried in Legislative Session 2007-2008 by Senator Ducheny, a Democrat with wetlands in his district who was seeking re-election after this Legislative term. He did not have any other co-authors supporting his bill. The bill appropriated funding for the Budget Act of 2007 to provide $974,000 to the Department of Fish

and Game's Coastal Wetland Account. This bill passed the Legislature in August of 2007 and was chaptered into law. Senator Ducheny's party affiliation, presence of wetlands in his district and his efforts in pleasing his constituency for re-election were successful in that his bill to allocated almost $1,000,000 to Coastal Wetlands was chaptered.

When looking at Senator Ducheny's outside monetary influences during the 2007-2008 legislative session, his average donation was $1,192.56 with 35 out of 83 total donors contributing $1,000 (the closest donation to the mean) to his efforts that year. Of those 35 contributors, there were four groups that represented potential in supporting wetland legislation, which included the Chesapeake Fish Company (Coastal fishing group), Maersk, Inc (a port shipping company), Chevron Corporation, and ConocoPhillips Company, two oil and gas companies that also do environmental wetland mitigation. Based off of his average contributions, Senator Ducheny's support from these four organizations can be categorized as generally supportive of wetland preservation, in support of his wetland-related bill.

The second bill was SB 1147 carried in Legislative Session 1999-2000 by Senator Leslie, a Republican with wetlands in his district and seeking re-election for the next session. SB 1147 revised AB 18, another bill in the 1999-2000 session, which enacted the Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000, allocating $2,100,000,000 for the acquisition, development, improvement, restoration, enhancement and protection of park, lake, riparian, river and coastal resources. According to the Senate Floor analysis, in addition to the provisions of AB 18, SB 1147 would create a separate account for the Lake Tahoe Environmental Improvement Program, and would allocate all money paid to the State Lands Commission by Lake Tahoe marina owners to be deposited into this account. This bill also enacted "cleanup" requirements to the provisions of AB 18 so funding could be allocated to those types of restorative projects.

Among Senator Leslie's 433 supporters in the 1999-2000 session, 21 were closest to the average donation of $583.50. Only one organization, the Del Oro Water Company, who contributed $600.00 to Leslie's efforts during this session, was determined to be a supportive organization of his wetland-related bill.

The third bill most similar to this cluster was AB 1801 in Legislative Session 2005-2006 carried by Assemblymember Laird, a Democratic member with wetlands in his district and seeking re-election, where this bill also did not have any co-authors. AB 1801 appropriated funding for the Budget Act of 2006-2007 where the wetland-related provisions of this bill allocated $5,000,000 to the Coastal Wetland Fund, through the Wildlife Conservation Board, and $2,000,000 to the Inland Wetland Conservation Program pursuant to Fish and Game Code.

Assemblymember Laird's monetary support for 2005-2006 averaged to be $233.33, with only 2 organizations that contributed closest to the mean. Neither of these two organizations were determined to be supportive of wetland-related bills. In that Assemblymember Laird was carrying the budget funding of this bill through the Wildlife Conservation Board, outside monetary organizational support might not have been necessary for the bill to pass.

Table 3. Cluster One: Monetary Influence. This table shows the average contributor for each representative case in Cluster One, with the name of the contributing organization and their total donation.

Cluster 1	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Senator Ducheny	2007-2008	$1,192.56	35	$47.00	$3,000.00	83	Chesapeake Fish Company	$1,000
								Maersk, Inc	$1,000
								Chevron Corporation	$1,000
								ConocoPhillips	$1,000
Case 2	Senator Leslie	1999-2000	$583.50	21	$41.85	$5,000.00	433	Del Oro Water Co	$600.00
Case 3	Assembly member Laird	2005-2006	$233.33	2	$100.00	$500.00	3	n/a	n/a

Cluster Two Profile: Chaptered Land Use Bills

Cluster Two contains 46 bills with similar characteristics. The majority of these bills were chaptered land use or property acquisition-related wetland bills, primarily carried by Democratic authors with wetlands in their districts that were up for re-election. These bills typically had no co-authors.

In looking at the second most common characteristics for this cluster, the next most common bill author was of the Republican Party not seeking re-election without wetlands present in their district. If there was a co-author for these cases, they typically had 3 or more co-authors supporting the bill. With multiple co-authors and a Democratic author, there is additional support for these bills, as they resulted in being chaptered. Not shown in the primary or secondary characteristics of the data, but the single Green Party co-author, Assemblymember Bock was present as a co-author in this cluster, which likely correlates with bill topic of land acquisition, or second most common bill topic of wetland mitigation efforts. The second bill status for this cluster was a veto by the Governor. In looking at the statistical output for this category, the total number of bills chaptered or vetoed by the Governor was 41 out of the 46 within this cluster. With both of these steps occurring after the bill has passed through both Houses, this shows that bills related to land use with democratic authors seeking re-election with wetlands present in their districts typically make it further in the legislative process.

Representative Case: Monetary Influence

The most representative bill for this cluster was AB 2156, carried in the 2001-2002 Legislative Session by Legislative member Kehoe, a Democratic member seeking re-election with wetlands in her district. AB 2156 was co-authored be Assemblymember Alpert, a Democratic member seeking re-election with wetlands in his district. This bill established the San Diego River Conservancy to direct the management of public lands in the San Diego River Area allowing management duties to be the responsibility of the conservancy until January 2010. AB 2156 designated land use management to the conservancy when this bill was chaptered into law.

In looking at Assemblymember Kehoe's finance support, her records for 2001-2002 show that her average donation was $534.00, and Chevron Corporation contributed, twice, closest to this mean, giving $500.00. Where Kehoe's bill was specific to the San Diego River Area, it is undeterminable if Chevron Corporation was contributing campaign funding in specific support of this bill, due to the fact that the bill specified another land manager for the wetland site.

Table 4. Cluster Two: Monetary Influence. This table shows the average contributor for each representative case in Cluster Two, with the name of the contributing organization and their total donation.

Cluster 2	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Assemblymember Kehoe	2001-2002	$543.00	84	$100.00	$5,000.00	280	Chevron Corporation	$500.00
								Chevron Corporation	$500.00

Cluster Three Profile: House of Origin Introduced Budget Bills

Cluster Three contains 33 bills with similar characteristics. The majority of these bills were budget-related bills introduced in the House of Origin, which failed before they could reach their House of Origin Policy Committee. These bills were carried typically by Democratic authors who were up for re-election with wetlands present in their districts. It is important to note that the cluster was nearly evenly split with regards to wetland presence, 17 bills had authors with wetlands in their districts and 16 were authored by members without wetlands in their districts. These bills typically had no co-authors. This profile clustered only Democratic and Republican Party affiliated members, it did not include bills with committees and independent party authors.

In looking at the second most common information found in this cluster, the bills were supported by Republican members not seeking re-election and without wetlands present in their district. If there was a co-author on the bill, they were Democrats not seeking re-election. These members were split equally on presence of wetlands in their districts. The second bill topic found in this cluster was water-related and the next highest bill status was failure at the House of Origin Policy Committee. This cluster clearly shows the majority of the bills in the initial steps of the legislative process. This shows that the spilt in presence of wetlands in both the author and co-author may have been influence to these bills not passing. The identification of a weak wetland presence as well as if there was a co-author they were not seeking re-election.

Whereas Cluster One is also a Budget bill cluster, these two clusters differ in that less wetland presence of the author, and if there was a co-author they were not seeking re-election and did not have a strong wetland presence, influenced this cluster. With less wetlands in an author's own

district, it may be more difficult to convince other legislators that your bill is sound. This can be seen as a legislative barrier. Where co-authors were not running for re-election may also be a barrier in other members not supporting specific legislation.

Representative Cases: Monetary Influence

After transposing this cluster, I was able to identifying three bills that were most similar to the profile of Cluster Three. The first bill was SB 54 carried in Legislative Session 2007-2008 by Senator Ducheny, a Democrat with wetlands in his district who was seeking re-election after this Legislative term. He did not have any other co-authors supporting his bill. The bill would have appropriated funding for the fiscal year of 2007-2008 to provide $136,000 to the Department of Fish and Game's Coastal Wetland Account. Prior to the bill dying, an amendment was made by the Senator to this bill to increase Coastal Wetland funding to $974,000. This bill ultimately died, but in looking at SB 77, one of the representative cases of Cluster One, Senator Ducheny was successful with SB 77 (rather than SB 54) during this legislative session for Coastal Wetland funding. Due to the fact that all author and co-author characteristics are the same, this bill likely died based on bill content based on amount of budget funding allocation to the Coastal Wetland Fund.

With the monetary influential data from Cluster One, Senator Ducheny's outside monetary influences during the 2007-2008 legislative session, were likely supportive of his wetland legislation.

The second bill representative of this cluster was SB 1067 in the 2007-2008 Legislative Session carried again by Senator Ducheny. This bill also did not have any co-authorship. The content of the bill would have appropriated $140,000 into the Department of Fish and Game's Coastal Wetland Account, but would also allow the State Controller to transfer $4,700,000 from the Coastal Wetland Fund to the General Fund. This budget bill was not chaptered into law. Again, due to the characteristics of authorship and monetary influence being consistent for Senator Ducheny, the bill likely died based on bill content of transferring $4.7 million out of the Coastal Wetland Fund.

The third bill most similar to this cluster was AB 1800 in Legislative Session 2005-2006 carried by Assemblymember Laird, a Democratic member with wetlands in his district and seeking re-election, where this bill also did not have any co-authors. AB 1800 had the same wetland provisions of AB 1801, one of the representative cases found in Cluster One. This funding was appropriated for the Budget Act of 2006-2007, where AB 1801 allocated $5,000,000 to the Coastal Wetland Fund, through the Wildlife Conservation Board and $2,000,000 to the Inland Wetland Conservation Program pursuant to Fish and Game Code. AB 1800 (of Cluster Three) failed in January of 2006, but AB 1801 (of Cluster One) was chaptered in June of 2006. With the same authorship and same monetary influences, the bill content that Laird was intending to pursue was passed in one of his bills. Another *de facto* practice is carrying many bills, that do not have bill content yet, so as to "gut and amend" or fill as necessary when a policy venue is needed. This quite possibly could have been the case for Assemblymember Laird.

Table 5. Cluster Three: Monetary Influence. This table shows the average contributor for each representative case in Cluster Three, with the name of the contributing organization and their total donation.

Cluster 3	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1 & 2	Senator Ducheny	2007-2008	$1,192.56	35	$47.00	$3,000.00	83	Chesapeake Fish Company Maersk, Inc Chevron Corporation ConocoPhillips	$1,000 $1,000 $1,000 $1,000
Case 3	Assembly member Laird	2005-2006	$233.33	2	$100.00	$500.00	3	n/a	n/a

Cluster Four Profile: House of Origin Introduced Wetland Conservation and Mitigation Bills

Cluster Four contains 12 bills with similar characteristics. The majority of these bills were Introduced in the House of Origin but later failed. They were related to either wetland conservation or mitigation. These two bill topics were equally the most common topics within this cluster. These bills were typically carried by Democratic members seeking re-election with wetlands in their district and no co-authorship.

The next most common bill author characteristics were Republican members who were not seeking re-election and did not have wetlands in their districts. If there was co-author to one of these bills, the co-author was a Democratic member seeking re-election with wetlands present in their districts. The third most common bill topic was Land Use and the second most common bill status was failure in Policy Committee in the House of Origin.

These findings show that similar to Cluster Three with bills that did not survive, the secondary bill author were Republicans who did not have wetlands in their districts. This is likely the cause of barrier in this cluster.

Representative Cases: Monetary Influence

In looking at the representative cases of Cluster Four: Introduced House of Origin Wetland Conservation and Mitigation Bills, there are three total cases that best represent this cluster. With a bi-modal bill topic category, one case represents Cluster Four (a): Wetland Conservation and two cases represent Cluster Four (b): Wetland Mitigation.

The first bill that represents Cluster Four (a): Wetland Conservation is AB 384 proposed during Legislative Session 2001-2002 by Assemblymember Nation, a Democratic author seeking re-election who also has wetlands present in his district. This bill sought to require the Regional Water Quality Control Boards (RWQCB) to implement a water quality-permitting program (401 certification) to conserve isolated wetlands that are not subject to regulations under the federal Clean Water Act (CWA). In the final version of the bill text, prior to the bill dying, the bill topic was broadened to all wetlands not pursuant to the CWA, not just isolated wetlands. This would have increased the workload of the RWQCB's 401 certification program. Due to the fact that this would create more permitting, it is likely that this bill died due to bill content.

Assemblymember Nation's campaign finance shows record for 2001-2002 an average mean of $674.30, where he only had one contributor closest to the mean of 239 donors. The single contributor closest to the mean did not likely support wetland-related bills. Therefore, Nation's bill most likely died based on bill content or requiring additional RWQCB areas to permit.

Cluster Four (b): Wetland Mitigation representative cases are AB 2465 and AB 2996. AB 2465 was carried in the 2009-2010 Legislative Session by Assemblymember Yamada, a Democratic member seeking re-election who did not have wetlands present in his district. He also did not have a co-author on this bill. In addressing ways to provide Best Management Practices for Mosquito Control pursuant to the requirements within the Department of Public Health, wetland plant growth control was proposed as part of the mitigation in controlling mosquito populations. This bill died in the House of Origin before it could be reviewed in the House of Origin Policy Committee. Assemblymember Yamada's campaign finance records show that no contributions were received for the 2009-2010 election cycle. Therefore, without insight into his finances, the likelihood of this bill dying is based on the bill author not having wetlands present in his district.

The second bill in Cluster Four (b) was AB 2996 in the 2005-2006 Legislative Session carried by Assemblymember Levine, a Democrat seeking re-election who did not have wetlands present in his district. He also did not have a co-author on this bill. This bill would establish the Automobile Brake Pad Mitigation Program, which would have included mitigation related to the clean-up of streams, creeks, estuaries, and wetlands. This bill did not pass the House of Origin. Similar to the first mitigation topic bill in this cluster, the likelihood of this not passing is based on the bill author not having wetlands present in his district.

Assemblymember Levine's campaign finance records show that his averaged contribution in 2005-2006 was $622.12 and there were only four contributing organizations of 52 that were closest to the mean. None of the four representing organizations were likely wetland mitigation supporters. The lack of outside support may also be a reason why this bill did not continue on in the legislative process.

Table 6. Cluster Four: Monetary Influence. This table shows the average contributor for each representative case in Cluster Four, with the name of the contributing organization and their total donation.

Cluster4a	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Assembly member Nation	2001-2002	$674.30	1	$25.00	$4,000.00	239	n/a	n/a

Cluster4b	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Assembly member Yamada	2009-2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Case 2	Assembly member Levine	2005-2006	$622.12	4	$100.00	$3,300.00	52	n/a	n/a

Cluster Five Profile: House of Origin Introduced Safe Drinking Water Act Bills

Cluster Five contains 16 bills with similar characteristics. The majority of these bills were Introduced in the House of Origin and were bills related to Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act. These bills were typically carried by Democratic members seeking re-election who did not have wetlands present within their districts. Wetlands are likely discussed in the body of these bills, but the intent with this bill topic is typically funding for water quality throughout the state. The majority of these bills did not have a co-author. The majority of the bills within this cluster died in the legislative process.

When identifying secondary influential characteristics in this cluster, the bill authors were typically of the Republican party not seeking re-election and without wetlands in their districts, whereas their co-authors were of the Democratic party seeking re-election and directly split on the presence of either having wetlands in their districts or not. The secondary bill topic of this cluster was Climate Change or Greenhouse Gas related and the end location of bills in the

legislative process was close to the primary characteristic, where secondarily, bills made it past the Introduced in the House of Origin but failed in House of Origin Policy Committee. The likely case for Cluster Five bills not passing the legislative process is likely the lack of wetland presence of bill authors and the second most common bill author were Republicans without wetlands and not seeking re-election.

Representative Case: Monetary Finances

The most representative case for Cluster 5 was SB 1283 in the most current legislative session (2011-2012) carried by Senator Alquist, a Democratic member not seeking re-election, without wetlands present in her district; this bill had no co-authorship. Her bill would establish the San Francisco Bay Area Sea Level Rise Planning Act, even though she represents the inland areas of Silicon Valley and Stanislaus and Merced Counties. This bill would have included the protection of wetland areas that are projected to be subject to sea level rise. This bill died after being introduced in the House of Origin. It is likely that this bill died due to the fact that she was not seeking re-election and she did not have wetlands in her district. She may have carried this bill for other collaborative planning reasons, where the Silicon Valley is an incredibly technologically productive area of the state and the climate change bill seem appropriate for her to carry in her last session.

Senator Alquist's campaign finance record shows her average mean donation for 2011-2012 was $898.08, with 16 of her 26 contributions for this session closest to this average. Of the contributors, none were determined to be supportive of wetland legislation. Therefore these bills likely died due to the fact that she was not running again and did not have wetlands in her district.

Table 7. Cluster Five: Monetary Influence. This table shows the average contributor for each representative case in Cluster Five, with the name of the contributing organization and their total donation.

Cluster 5	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Senator Alquist	2011-2012	$898.08	16	$250.00	$1,500.00	26	n/a	n/a

Cluster Six Profile: House of Origin Introduced Coastal Wetlands and Delta Program Bills

Cluster Six contains 29 bills with similar characteristics. The majority of these bills were House of Origin Introduced bills and primarily related to two topics, either Coastal Wetlands or the Sacramento San Joaquin Delta Program. These bills were typically carried by Democratic members seeking re-election who had wetlands present within their districts. The majority of these bills did not have a co-author.

In secondary characteristics, this cluster was similar to Cluster Five, where authors were of the Republican party not seeking re-election and did not have wetlands present in their districts. If there was a co-author, they were Democrats seeking re-election with wetlands present in their district. The second most common bill topic was the Safe, Clean, and Reliable Drinking Water Supply Act. This cluster, where the bi-modal bill topic seems more focused on specific programs of the Delta and on the Coast, that the next bill ranked most common in topic would be on water supply program areas (not necessarily funding because this Act is not a Bond Act). Lastly, the secondary bill location in this cluster was failure in the House of Origin Policy Committee. The likely possibility of these bills dying is bill content, in that the program areas might have specifications that are not satisfactory with the majority of the legislature.

Representative Cases: Monetary Finances

There are two representative cases for Cluster Six(a): Coastal Wetlands, SB 42 and AB 2502. SB 42 was carried in the 2009-2010 Legislative Session by Senator Corbett, a Democratic member seeking re-election without wetlands present in her district. This bill did not have any other co-authors. SB 42 would prohibit a state agency from authorizing, approving or certifying a new powerplant, specifically those that utilize an open seawater intake system. This affects Coastal

Wetland areas should a powerplant need seawater intake. The bill died after being introduced in the House of Origin. Due to Senator Corbett's lack of wetlands present in her district and the controversial subject of this bill, the likelihood of this bill dying was based on those two characteristics.

Senator Corbett's campaign finance shows for the year of 2009-2010 her average mean contribution was $773.14 with two organizations out of 492 closest to this mean. Neither of the two organizations were determined influential to the carrying of wetland legislation.

AB 2502 was introduced in the 2007-2008 Legislative Session carried by Assemblymember Wolk, a Democratic member seeking re-election who does not have wetlands in her district. This bill would have acquired land to be designated as a "Delta Ecological Restoration and Recreation Area" through the Parks and Recreation Department, clearly related to the Coastal Wetlands within the Delta. This bill died after being introduced in the House of Origin. Assemblymember Wolk's campaign finance records show that she does not have contributions received for this legislatives session. Therefore, the lack of wetlands in her district are what likely contributed to this bill not passing.

There are two representative cases for Cluster 6b: Delta Programs, the first, AB 537. AB 537 was introduced in the 2001-2002 Legislative Session by Assemblymember Canciamilla, a Democratic member seeking re-election with wetlands present in his district. This bill did not have a co-author. This bill would make it a misdemeanor for a person to secure, anchor, or moor, or permit those actions of a vessel in a harbor, waterway, or maritime facility, if the vessel is unseaworthy or in badly deteriorated condition. This bill did not continue after being introduced in the House of Origin. Based on the specificity of this bill, I would likely determine that because of the narrow bill topic, this bill did not pass the legislature. Assemblymember Canciamilla's campaign finance shows that there are no records of contributions received during this session.

The second bill was AB 2502, the same second bill described in Cluster 6a: Coastal Wetlands representative cases. This bill was found in both clusters because it relates topically to both Coastal and Delta wetlands, which were the two dividing topics of this bi-modal cluster. This bill

did not pass the legislative process likely because the bill author, Senator Wolk, did not have any wetlands in her district and did not have any archived contributions during this time frame.

T**able 8. Cluster Six: Monetary Influence.** This table shows the average contributor for each representative case in Cluster Six, with the name of the contributing organization and their total donation.

Cluster 6a	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Senator Corbett	2009-2010	$773.14	2	$50.00	$7,800	492	n/a	n/a
Case 2	Assemblymember Wolk	2007-2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Cluster 6b	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Assemblymember Canciamilla	2001-2002	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Case 2	Assemblymember Wolk	2007-2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Cluster Seven Profile: Chaptered Common Interest Development Bills

Cluster Seven contains 20 bills with similar characteristics. The majority of these bills were Chaptered Common Interest Development, the fastest-growing form of housing development, also known as Planned Unit Development (PUD) (State of California Department of Real Estate, 2012). These bills were typically carried by Democratic members seeking re-election, and who had wetlands present within their districts. The majority of these bills did not have a co-author.

The secondary characteristics of this cluster include Republican authors who were not seeking re-election and without wetlands present in their districts, whereas if there was a co-author they were Democrats seeking re-election with wetlands present in their district. The next highest bill

topic was Coastal Wetlands and the next highest end location in the legislative process was step 10, where the Governor vetoed these bills. The findings here show that this cluster was chaptered likely based on the bill topic, in that PUDs are a recent development tool and this bill exemplified further implementation of PUDs; therefore the bill was favorable to the legislature and passed.

Representative Case: Monetary Finances

The most representative case for Cluster 7: Chaptered Common Interest Development Bills was AB 771 carried in the current 2011-2012 Legislative Session by Assemblymember Butler, a Democratic member seeking re-election with wetlands in his district. This bill did not have a co-author. This bill would require that the seller of a property provide a copy of the minutes from the meeting (i.e. documentation) from the homeowner's association should they be requested by the prospective purchaser. Clearly this bill is more directly related to development rather than wetland protection. Provisions within this bill require funding of development mitigation be utilized to restore or maintain wetlands or native habitat. This bill was chaptered into law.

Assemblymember Butler received 1169 total contributions, where 35 were closest to the averaged donation of $1,596.12. Her largest donation was $60,000. Of the 35 that were closest to the mean, none of the organizations were determined to be related to wetland legislation. This shows that this bill was likely passed due to the fact that Butler is a Democratic member with wetlands in her district seeking re-election. Also bill topic may have likely contributed to the passage of this bill. It was determined that her monetary support did not influence specific wetland legislation, but due to the high number of contributors, she may likely have had developers or homeowner associations listed that provided her contributions, but they were not closest to the mean.

T**able 9. Cluster Seven: Monetary Influence.** This table shows the average contributor for each representative case in Cluster Seven, with the name of the contributing organization and their total donation.

Cluster 7	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Assembly member Butler	2011-2012	$1,596.12	35	$9.02	$60,000	1169	n/a	n/a

Cluster Eight Profile: Chaptered Maintenance of Codes Bills

Cluster Eight contains 10 bills with similar characteristics. The majority of these bills were Chaptered Maintenance of Codes bills, which are typically utilized to amend statute or utilized to make last minute changes in legislation by carrying a simple code change bill all the way through the legislative process and then "gutting and amending" the bill at the very end of the session to address newly emerged issues and insert new bill statute into law without oversight and review of the entire legislative process (Gut and Amend Legislation, 2012). This practice is highly controversial, yet occurs with some frequency in the legislature. These bills were typically carried by Democratic members seeking re-election. Authors in this cluster were spilt on either having wetlands present within their districts or not. The majority of these bills did not have a co-author.

The secondarily common co-authors were committee, which is similar in why committees carry budget bills. If more members of the legislature are in support of a Maintenance of Codes bill, then it is more likely to travel through the process more quickly and make it to the end of the legislative process more easily. If there was a co-author, they were of the Democratic party seeking re-election and did have wetlands present in their districts. The next most commonly ranked bill topic was bi-modal, related to Climate Change and Greenhouse Gases and the Safe Drinking Water Bond Act. Lastly, the next most commonly ranked in bill status was step 10, veto by the Governor. These bills were likely chaptered due to bill topic, where codes typically have minute changes in content that they propose.

Representative Case: Monetary Finances

The most representative case for Cluster Eight: Maintenance of Codes bills is SB 1171 from the current Legislative Session carried by Senator Harman, a Republican not seeking re-election who did not have wetlands in his district. This bill allows for community service organizations or entities to provide in part funding for environmental mitigation related to wetland restoration or maintenance. This was not the only provision of this bill but was listed within the context of the bill content. This bill was chaptered into law. Due to the nature of the bill content, it is likely that this bill was passed based on bill topic.

Senator Harman's campaign finance in the 2011-2012 session shows her average mean to be $945.07 with 20 organizations closest to this mean. Of the 20 organizations, ConocoPhillips Company stood out as a business that would support wetland legislation. They contributed $1,000 to Senator Harman for this session. Based on this monetary influence and bill content, it is likely why this bill was chaptered into law.

Table 10. Cluster Eight: Monetary Influence. This table shows the average contributor for each representative case in Cluster Eight, with the name of the contributing organization and their total donation.

Cluster 8	Member	Session	Mean	# of Mean Contributors Closest to Mean	Minimum	Maximum	Total Contributors	Contributor	Amount
Case 1	Senator Harman	2011-2012	$945.07	20	$99.00	$3,200.00	61	ConocoPhillips Company	$1,000.00

Discussion of Significant Findings

The following discussion will isolate the clusters that were characterized with chaptered bills and failed bills so as to further understand the legislative barriers of wetland-related bills. The reference of Table 1 and Table 2 will be necessary for this discussion.

Bill Passage Characteristics

Of the eight clusters that emerged, four were dominated by the 96 bills surviving the legislative process and were chaptered into law. These clusters included:

- Cluster 1: Chaptered Budget Bills
- Cluster 2: Chaptered Land Use Bills
- Cluster 7: Chaptered Common Interest Development Bills
- Cluster 8: Chaptered Maintenance of Codes Bills

The chaptered clusters show similar trends in bill topic, where Clusters One and Eight are specific modifications to either code or budget, and Clusters Two and Seven are specific to land use acquisition and development practices. These topics can be considered "indirect" ways of influencing wetland conservation through bill passage. In looking at implementing wetland conservation, these bills provide funding and enact other land programs that may require wetlands to be incorporated somehow through land development and land acquisition. With topics that are more encompassing, such as budget bills or code bills, they are also likely to get voted on by the majority of legislative members. When a bill topic is very specific in the amount of funding or for the requirements of a program, these types of bills are more turned down due to opposing views of the specificity of bill detail.

Another common trend in the chaptered bills is the skew of bill status. Of the four clusters, three of the clusters had the second most common bill status of Gubernatorial veto, the step in the legislative process just prior to being chaptered into law. This shows that the bills that were not chaptered were still very close to the end of the legislative process and were approved by both Houses. With the Governor's veto as the second most common bill status, also clearly shows that the Governor is more interested in budget and code bills, as he/she proposes the budget each session. Therefore, having the opportunity to veto those types of bills based on his/her own

budget plan is likely to occur. When a co-author was identified for these chaptered bills, that member was a Democratic member seeking re-election with wetlands in their district. Each of these characteristics directly shows that the majority party of California, the Democratic Party, is more likely to have their bills passed when they have a partisan partnership between a Democratic author and a Democratic co-author. Also, when both the Democratic author and co-author have wetlands in their district, their bills are more likely to pass; as well as when both of the Democratic members are running for re-election and are showing to their constituency that they are supporting wetland conservation in the state and in representing their district.

Overall, the trend in wetland-related bills that are chaptered relates to bill topics of budget and codes, as well as bill topics of land use and development. When Democratic partisan co-authorships are paired for members that are running again in districts that have wetlands, their bills are more successful in passing through the barriers of the legislative process.

When looking back to the initial overall chaptering rate of bills in the legislature, approximately 20.64 percent of bills are chaptered in a two-year session. The chaptering rate for wetland-related legislative bills within this study is approximately 41.74 percent. This shows that wetland bills are chaptered at a significantly higher rate than the average bill. But still the majority of wetland legislation fails at some point in the legislative process, with a failure rate of 58.26 percent of wetland bills.

Bill Failure Characteristics

Of the eight clusters that emerged from the analysis, four included the failure of 134 bills throughout the legislative process. Two of these clusters were considered bi-modal in bill topic; this provides six clusters of bills that did not pass through the legislative process. These clusters included:

- Cluster 3: Introduced into the House of Origin Budget Bills
- Cluster 4a: Introduced into the House of Origin Wetland Conservation Bills
- Cluster 4b: Introduced into the House of Origin Wetland Mitigation Bills
- Cluster 5: Introduced into the House of Origin Safe Drinking Water Act Bills
- Cluster 6a: Introduced into the House of Origin Coastal Wetland Bills

- Cluster 6b: Introduced into the House of Origin Delta Program Bills

The bill failure clusters show similar trends in legislative barriers to the wetland bills proposed. Clusters Three and Five both had Democratic bill authors that lacked wetland presence in their districts, and if there was a Democratic co-author they also had less wetlands present in their districts. In acknowledging that representation of a members district is important in carrying legislation, this posed as a barrier for these two clusters. It is also significant to note that these two clusters were either budget related or Bond Act related. Bond Acts such as the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Bond Act, are not voted on each year, as the annual budget is voted on each session, so Cluster Five also has bill topic as a legislative barrier. When looking at Cluster Three as a budget bill that failed, comparing it to Cluster One that had a cluster of budget bills chaptered, the differences between the two clusters are that Cluster One had additional co-authorship support from other members of the same party or from Committee authors. Cluster Three lacked strong co-author, where the co-author Democrats in Cluster Three were not up from re-election and did not represent wetlands in their district. Therefore, Cluster Three and Five faced legislative barriers in bill topic and the lack of strongly represented co-authors.

When looking at the bill failures in the remaining Clusters Four and Six, including Four (a), Four (b), Six (a), and Six (b), the trend in bill failure is seen in too narrow of bill topic. Cluster Four represents direct wetland conservation and mitigation bills, which are not favorable or on the agenda of every member in the legislature. Likewise, Cluster Six promotes specific environmentally protective programs for Coastal Wetlands and the Sacramento-San Joaquin Delta Wetland Program. Each of these programs are specific and require additionally allocated funding for enhancement and protection of these areas, where other legislative members may not be in agreement on allocating funds to other specific areas of the state.

Another common trend in the bill failure clusters is the bill status. Of the four overall clusters, three of the clusters had the second most common bill status of Failure in the House of Origin Policy Committee, the step directly after the most common legislative failure point of not continuing forward through the House of Origin after initial bill introduction. This is significant in showing that these bills are skewed to the early steps in the legislative process.

The overall contributing characteristics of wetland-related bill failure are too specific of bill topic, either in direct wetland preservation and programing or in lacking supportive co-authorship of members who have wetlands in their districts and who are pursuing re-election. The significance of my findings shows that the differences between bills that are chaptered have broader land management and budget or code related bill topics, and have Democratic partisan co-authorship with strong support of representing wetland areas in re-election years. In comparing these sets of clusters, the legislative barriers of the failed bill clusters were not present in the chaptered bill clusters. Therefore, the legislative barriers of the failed bill clusters shall be considered for further recommendation.

Representative Cases and Monetary Finance

The representative case studies of each cluster provided greater detail of the campaign finance supporting members carrying wetland legislation. In comparing the chaptered bill clusters to the failed bill clusters, in terms of campaign finance, there is some differentiation in support for wetland legislation. The chaptered bill clusters had significant contributions from organizations that were determined in supporting wetland enhancement. When basing determination off of the mean contribution, the clusters with bills that failed typically did not have the support of outside organizations and their monetary contributions, which could be another barrier as to why these bills did not pass through the legislative system. It is also noteworthy to state that overall the average contributions to the chaptered bill clusters were significantly higher than the failed bill clusters. The only exception to this statement is Clusters One and Three, both based on budget bills that were represented by the same bill case and therefore the same member contributions. This further tells us that if we disregard the shared representative case in Clusters One and Three, the greatest maximum contributions typically occurred in chaptered bill clusters, as well as an increase in the number of donors.

Therefore, in the bill clusters that failed, there were less contributors overall and the giving of maximum amounts was in smaller donation size. This is another trend in legislative barriers for failed wetland-related bills. In not receiving outside organizational monetary support for bill passage, there is greater correlation that those bills will not pass.

Recommendations for Navigating Legislative Barriers

In recognizing that there is no national or state wetland conservation act, the State of California continues to manage wetlands in a fragmented approach and the legislative process is one of the mechanisms or avenues for the introduction of wetland policy. Therefore, this research design, in analyzing 230 wetland-related legislative bills, can provide a series of recommendations for navigating legislative barriers. To help ensure that legislators, policy analysts, and advocates in favor of wetland conservation efforts have the opportunities to continue to push related legislations forward, the following recommendations are listed as guidance in navigating the potential barriers.

Recommendation 1: Bill topic was a key characteristic in both the bill chaptered clusters and the bill failure clusters. Bill topics such as budget, code, and land use/common development move more quickly through the legislative process. On the contrary, bill topics that have in-depth conservation or mitigation efforts, or bills that are specific to regional wetlands are less likely to be chaptered. Therefore, integration of conservation or mitigation efforts into budget or code bills is recommended. Another strategic attempt in addressing regional wetland projects, can be to regionally distribute funding or efforts on conservation through the state, so as to gain legislative member support and additional co-authorship on future wetland-legislative bills.

Recommendation 2: Support wetland conservation efforts if there are areas in your legislative district. When there were wetlands present in a district, the bill author or co-author were more successful in carrying legislation.

Recommendation 3: Generally, if up for re-election, democratic members with wetlands present in their districts have a higher chance of bill survival.

Recommendation 4: Author and co-authorship is most successful, when two Democratic members partner in a partisan authorship. Further success was observed from committees support legislation or 3 or more co-authors supporting legislation. When there are additional members in support of a bill, it is more likely to be stewarded through the legislative process.

Recommendation 5: Monetary support from outside advocacy groups or organizations is overall beneficial for wetland bill success. The greater the donation amount and the more contributors, the more likely legislation will be chaptered.

Should legislators, policy analysts, or environmental advocacy groups obtain these recommendations, further implementation of these recommendations on navigating through these barriers is predicted to result in successful wetland-related bill passage through the California Legislature.

Evaluation of Research Design

The research design for this study should be accurately evaluated to address the limitations and biases of the research. As the primary researcher of this study, I recognize the importance of evaluated the research design as a whole and identifying the researcher role, bias, and limitations of this study.

Research Design

The topic of research was very specific in addressing California wetland legislation and the barriers identified in a 12-year time frame specific to the California State Legislature. In that this study was specific, it may not have led to as significant of outcomes in addressing national or federal wetland loss and consequently, wetland conservation and regulation. That said, the approach to this study can be utilized and replicated at a national level with congressional bills and federal advocacy organizations contributing to wetland legislation, federally. In understanding cluster analysis and case representative methodology, these steps can be used as forecasting tools for other studies of similar approach.

The characteristics which determined the types of barriers in the legislative process could also be changed. There could be measurements within specific party affilitated groups, indetifying internatl party barriers. There could also be specific analysis of one step of the legislative process and what characterizes bill from surviving a specific step. Indentifiaction of a specific member who has carried many wetland or environmentally-related bills could be tracked through their legislative tenure to indentify changes in bill author behavior, further influencing the type of bills that survive the legislative process.

Lastly, in the development of the research design, all of the bill content data was hand collected. All of the statistical calculations were inputted via the researcher, all transposing of the data to determine representative cases was conducted by hand in excel, and all of the monetary finances information was researcher online and influence organizations were determined by the researcher based on an understanding of the mission of each contributor and their assumed monetary gain in contributing. As thorough and carefully researched as this project was, there is the potential for human recording error, throughout the data.

Role of the Researcher

My role as the primary researcher for this design was to conduct a study that would systematically identify the common characteristics of legislative barriers on wetland policies in the California State Legislature. In the literature review of both legislative process and wetland significance, research methodology, and in conducting the analysis, my role was to remain un-biased and analyze the data based on the objective information outlined in the literature and methodology. As a Bachelor of Science Environmental Management and Protection undergraduate of Cal Poly and a Field Representative of the current 15th State Senate District, my personal biases could have potentially intervened in my critical and objective analysis of this study. Fortunately, with extensive review from my peers and advisors, I successfully completed the project to the best of my abilities. The highest likely form of bias was in gathering the bill data. With a total of 230 cases and the 8 critical categories to identify, human error in entering data could have occurred. In reviewing the data extensively, avoidance of any human error was attempted.

In the overall objectiveness of this study, I believe that the results of this research design are incredibly applicable to the types of bills that are currently being carried by the legislative body and the barriers that are currently preventing wetland-related legislation in successfully passing the Legislature. An evaluation of this research design will occur through review from the research design advisors, as well as when it is presented and critiqued at the Western Region Political Science Association Conference in March of 2013 in Hollywood, California.

Conclusion

Where the State of California has lost 90 percent of its wetlands over the last 200 years to agricultural land conversion and urban development, identification of the legislative barriers in attempting to pass wetland-related policies is of urgent need in protecting the vital resources that are still in existence today (California, 2012).

An investigation of 230 legislative bills introduced between 2000 and 2012 identified and analyzed the trends, shortfalls, and outcomes of California wetland-related bills. This multi-method study created in-depth results on the assessment of bill content and statistical output of bill survivability through the legislative process. Two phases were utilized in this research design to track and analyze bill content, legislative procedures, and influential monetary characteristics.

Approximately 134 bills failed the legislative process, resulting in a 58.24 percent failure rate of wetland-related bills. The identified legislative barriers from the data examined included narrowly specific bill topics, in program areas or conservation efforts, lack of wetlands present in represented districts when carrying wetland-related legislation during re-election, lack of partisan co-authorships, lack of committee or multiple co-author support, lack of increased monetary support, and lack of in significant number of monetary contributors.

In that these were the most common legislative barriers found in this research, five recommendations were provided in an attempt to navigate these barriers, through increased partisan support on legislation, increased wetlands representation, increased monetary finance support and quantity, keen choice of bil topic and correlated efforts during re-election for representatives with wetland present in their districts.

In understanding that wetland preservation is based on the ecosystem's vitality, conservation of these natural areas is incredibly important not simply for the ecosystem but for an equalized balance in managing our state's natural resources and human impacts. Integration of wetland areas into urban areas brings greater awareness to the surrounding environment and allows for a controlled human footprint to be created based on community structure. The results of this research design provide greater understanding to California's legislative barriers in looking at

failed wetland-related policies over the past 12 years. The recommendations from this research design provide greater insight to navigating these legislative barriers in attempting to continue to preserve wetland areas and conserve these spaces for our future generations.

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Appendices

Appendix A. Environmental Performance Graphics

The following indices below show the Environmental Performance based on environmental health and vitality and how policies are categorically identified based off of these indicators, as well as the breakdown of the United State's Environmental Performance Index statistics.

Environmental Performance Index Framework

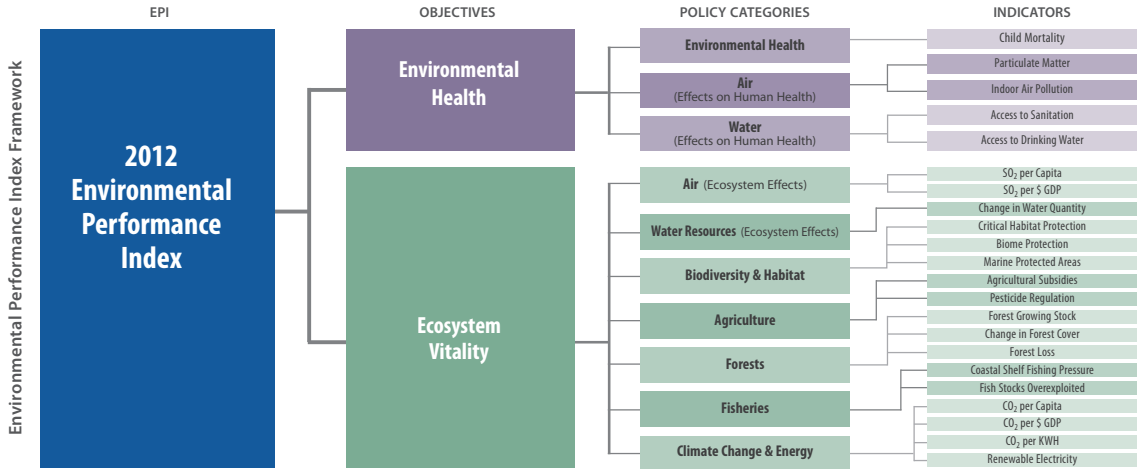


Figure 9. Environmental Performance Index Framework. This image shows the ranking of environmental health and vitality and the associated policy areas and indicators. (Siy, Koziol, & Rollins, 2011).

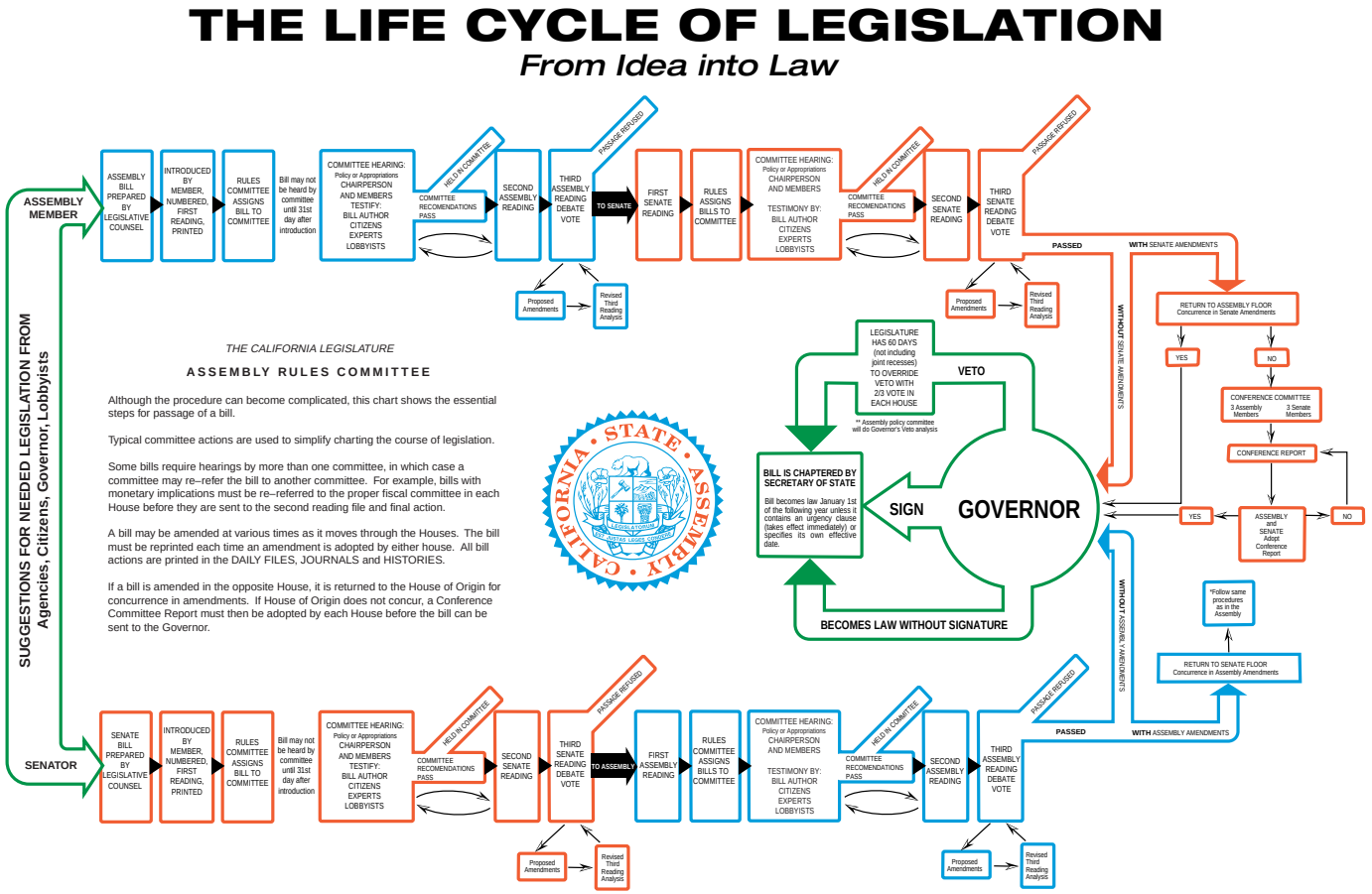
United States of America Environmental Performance Index Profile

Level of Aggregation	Performance Score	Performance Rank	Performance Score with Trend Shading (0 – 50 – 100)	Pilot Trend Results Score (-50 to 50)	Pilot Trend Results Rank
Environmental Performance Index	**56.6**	**49**		**3.6**	**77**
Environmental Health	**94.5**	**26**		**3.5**	**113**
Air (Effects on Human Health)	100.0	1		0.0	73
Environmental Burden of Disease	92.9	26		6.9	102
Water (Effects on Human Health)	92.1	31		0.0	84
Ecosystem Vitality	**40.4**	**100**		**3.7**	**33**
Agriculture	55.2	55		23.3	23
Air (Ecosystem Effects)	30.4	92		10.1	68
Biodiversity and Habitat	71.8	48		0.2	72
Climate Change	17.7	121		25.9	16
Fisheries	17.2	92		3.9	34
Forests	79.0	72		-10.5	72
Water Resources (Ecosystem Effects)	12.6	104		-43.7	104

Figure 10. Environmental Performance Index Profile. This image shows the percentages of environmental health and vitality. (Environmental Performance Index, 2012).

Appendix B. Life Cycle of Legislation

The following diagram shows the life cycle of legislation in the California Legislature. This example is from the California State Assembly. T
process, whereas the in-text diagram of the eleven step legislative process was created by the research designer to simply the process and iden



Appendix C: Bill Tracking Coding

The following figures show how the 230 wetland bills were categorized and coded for excel database tracking of characteristics. After charted imported into SPSS software for further analysis of cluster categorization and representative cases studies.

Bill Tracking Database

Data Catergory	Code
House	
Senate Bill	1
Assembly Bill	2
Bill Number	
Insert Assigned Bill Number	N/A
Bill Author	
Insert Author Name	N/A
Author Party Affiliation*	
Democrat	1
Republican	2
Independent	3
Committee	4
Presence of Wetlands in Author District*	
Yes	1
No	2
Non-applicable	3
Author up for Re-election*	
Yes	1
No	2
Non-applicable	3
Co-Author Name	
Insert Co-Author Name	N/A
No Co-Author	0
Co-Author Party Affiliation*	
No Co-Author	0
Democrat	1
Republican	2
Independent	3
No party affiliation (3 or more Co-Authors)	4
Presence of Wetlands in Co-Author District*	
No Co-Author	0
Yes	1
No	2
Non-applicable	3
Co-Author up for Re-election	
No Co-Author	0
Yes	1
No	2
Non-applicable	3

Data Category	Code
Bill Topic*	
Insert Bill Topic (Specified Coding Number)	N/A
Bill Content	
Insert Description of Bill	N/A
Where Bill Ended in Legislative Process	
Insert Description of where Bill ended	N/A
Bill Status Number (Step in Leg Process)*	
Step 1	1
Step 2	2
Step 3	3
Step 4	4
Step 5	5
Step 6	6
Step 7	7
Step 8	8
Step 9	9
Step 10	10
Step 11	11
Session	
1999-2000	1
2001-2002	2
2003-2004	3
2005-2006	4
2007-2008	5
2009-2010	6
2011-2012	7

Specified Bill Topic Number
Wetland Conservation
Mitigation
Property Acquisition/Land Use
Restoration/Enhancement
Recreation
California Environmental Quality
Budget
Fish and Wildlife
Resource Management
Water
Noxious Weeds
Natural Heritage Preservation
Safe, Clean, and Reliable Drinkin
Common Interest Developments
Natural Community Conservatior
Coastal Wetlands
Tidelands and Submerged Lands
Sacramento-San Joaquin Delta Cc
Urban Growth Boundary
Vessels
Safe Drinking Water, Clean Wate
Education
Climate Change/Greenhouse Gas
Maintenance of the Codes

Figure 12. Bill Tracking Coding. The following figures show the categorical characteristics with their associ input and statistical output of legislative bills.

Appendix D: Determination of Wetland Presence in Districts

The following series of maps show the determination of wetland presences in a bill author's district. The maps on the left show wetland presence and the maps on the right show Senate and Assembly Districts.

Wetland Presence in Northern California Senate Districts

Wetland Presence in Northern California

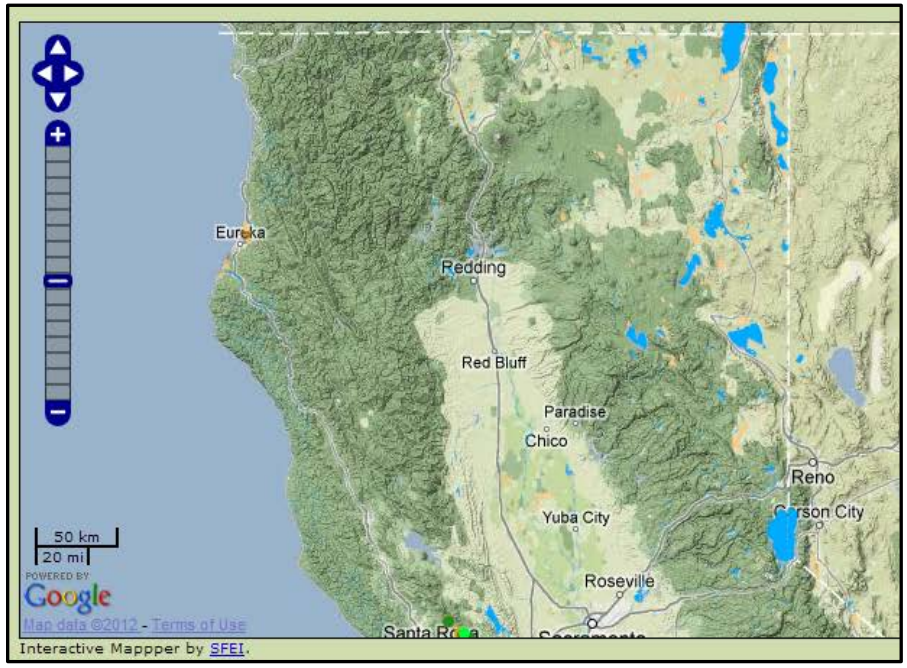


Figure 13.Wetland Presence in Northern California. This image shows the wetlands present in the Northern part of California (California Wetland Portal, 2012).

State Senate Districts in Northern California

Figure 14. State Senate Districts in Northern California. This image shows the state senate districts in the Northern part of California (California Legislature Districts, 2012).

Wetland Presence in Central California Senate Districts

Wetland Presence in Central California

15.Wetland Presence in Central California. This image shows the wetlands present in the Central part of California (California Wetland Portal, 2012).

State Senate Districts in Central California

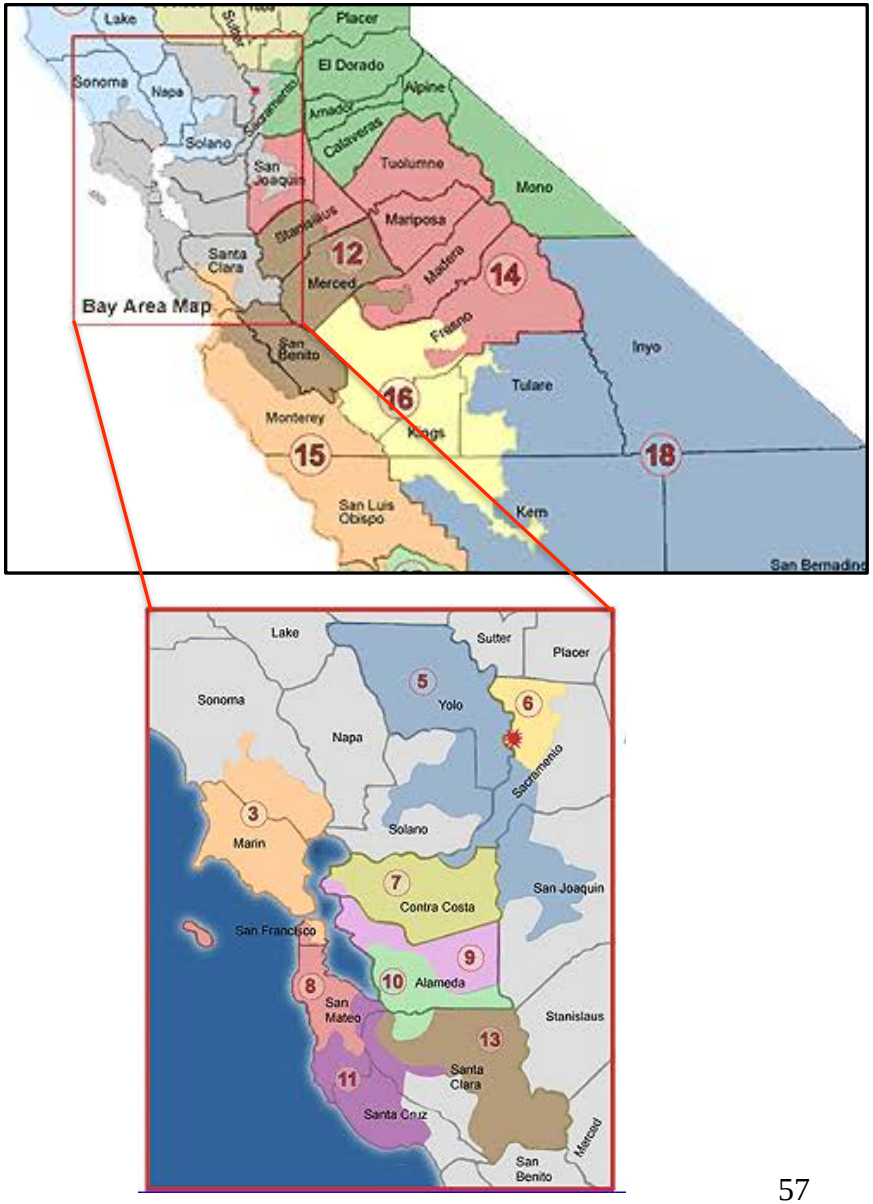


Figure 16. State Senate Districts in Central California. This image shows the state senate districts in the Central part of California (California Legislature Districts, 2012).

Wetland Presence in Southern California Senate Districts

Wetland Presence in Southern California

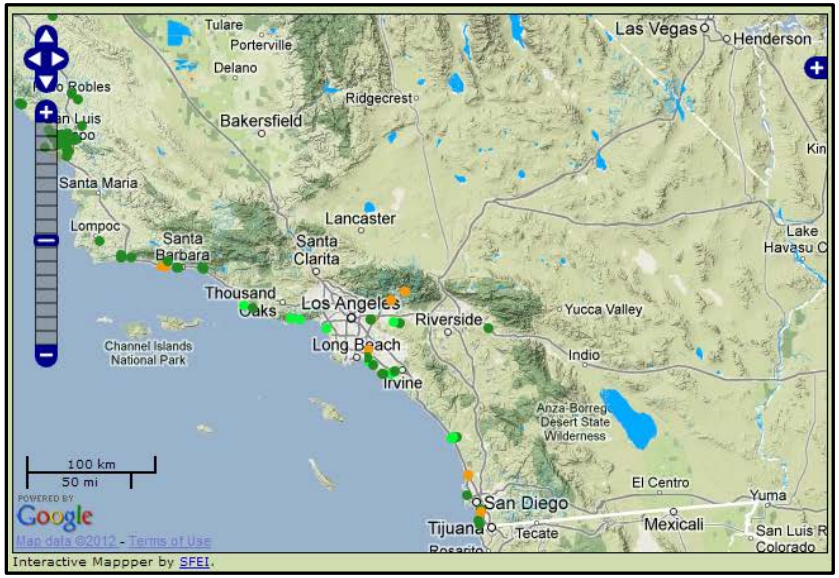


Figure 17. Wetland Presence in Southern California. This image shows the wetlands present in the Southern part of California (California Wetland Portal, 2012).

State Senate Districts in Southern California

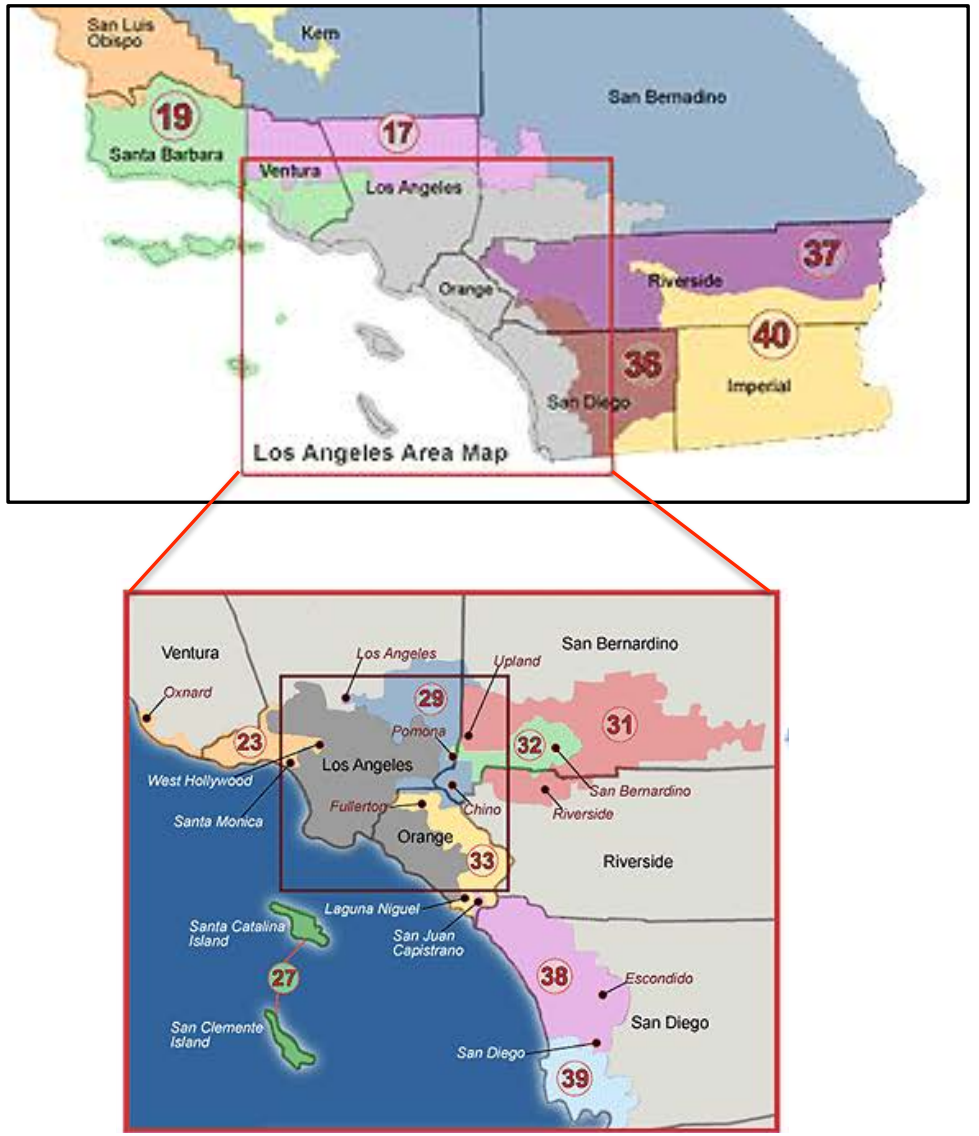


Figure 18. State Senate Districts in Southern California. This image shows the state senate districts in the Southern part of California (California Legislature Districts, 2012).

Wetland Presence in Northern California Assembly Districts

Wetland Presence in Northern California

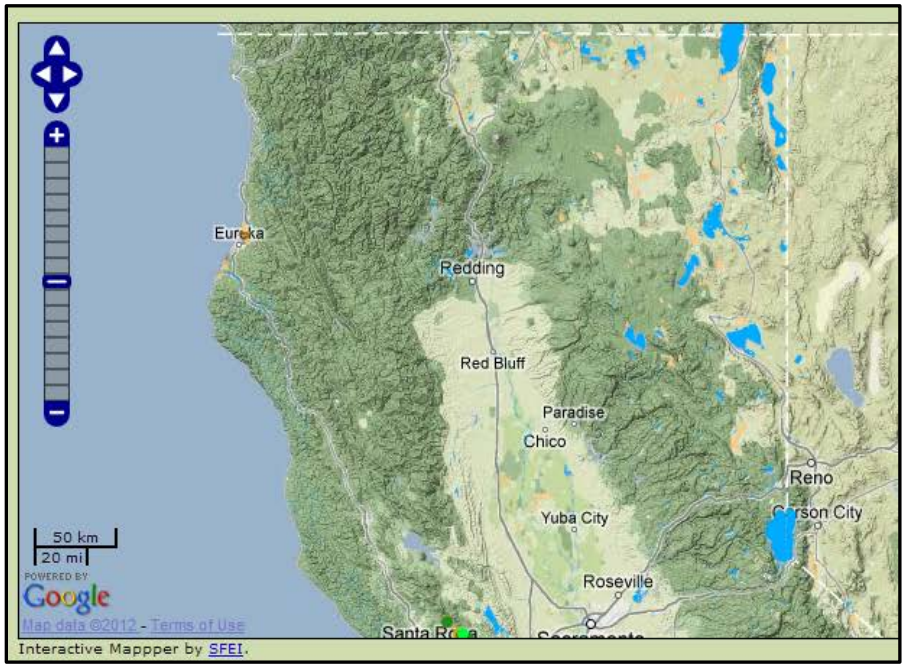


Figure 19. Wetland Presence in Northern California. This image shows the wetlands present in the Northern part of California (California Wetland Portal, 2012).

State Assembly Districts in Northern California

Figure 20. State Assembly Districts in Northern California. This image shows the state assembly districts in the Northern part of California (California Legislature Districts, 2012).

Wetland Presence in Central California Assembly Districts

Wetland Presence in Central California

Figure 21. Wetland Presence in Central California. This image shows the wetlands present in the Central part of California (California Wetland Portal, 2012).

State Assembly Districts in Central California

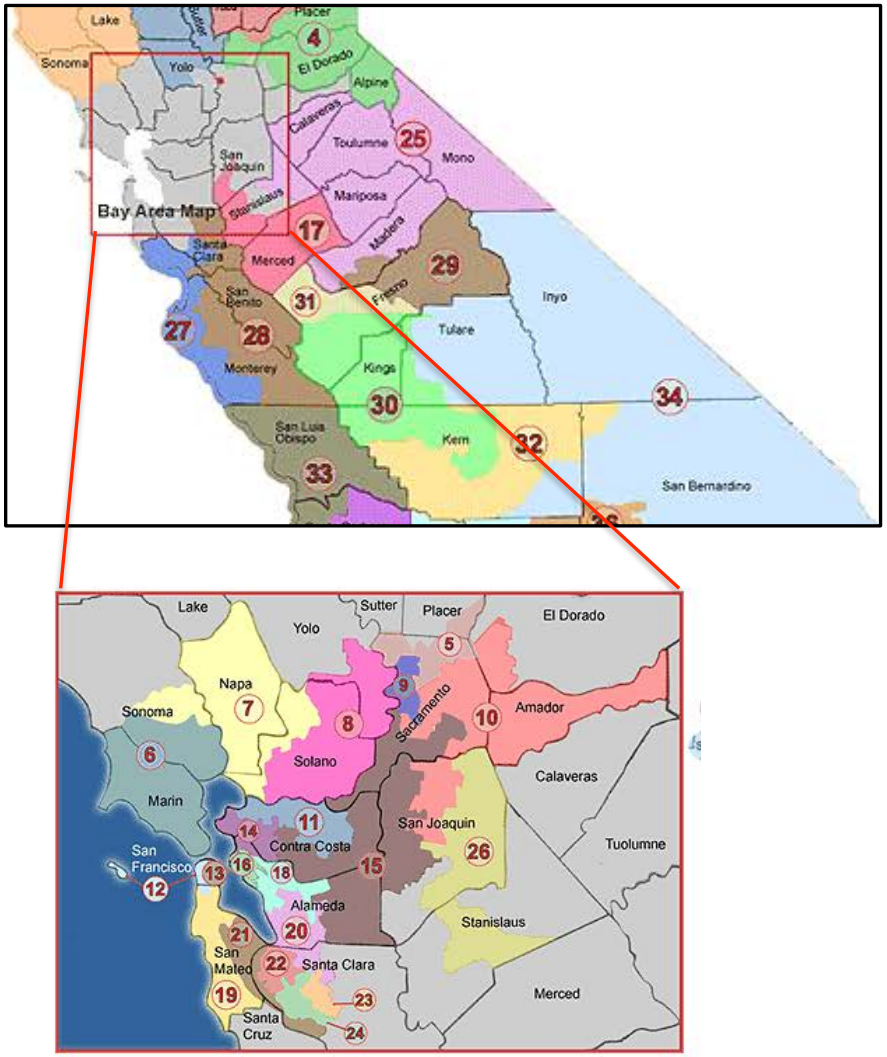


Figure 22. State Assembly Districts in Central California. This image shows the state assembly districts in the Central part of California (California Legislature Districts, 2012).

Wetland Presence in Southern California Assembly Districts

Wetland Presence in Southern California

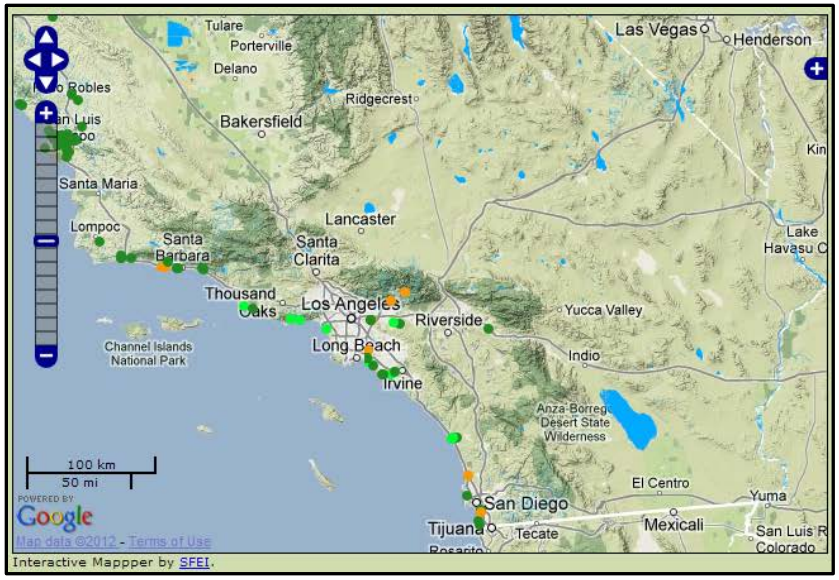


Figure 23. Wetland Presence in Southern California. This image shows the wetlands present in the Southern part of California (California Wetland Portal, 2012).

State Assembly Districts in Southern California

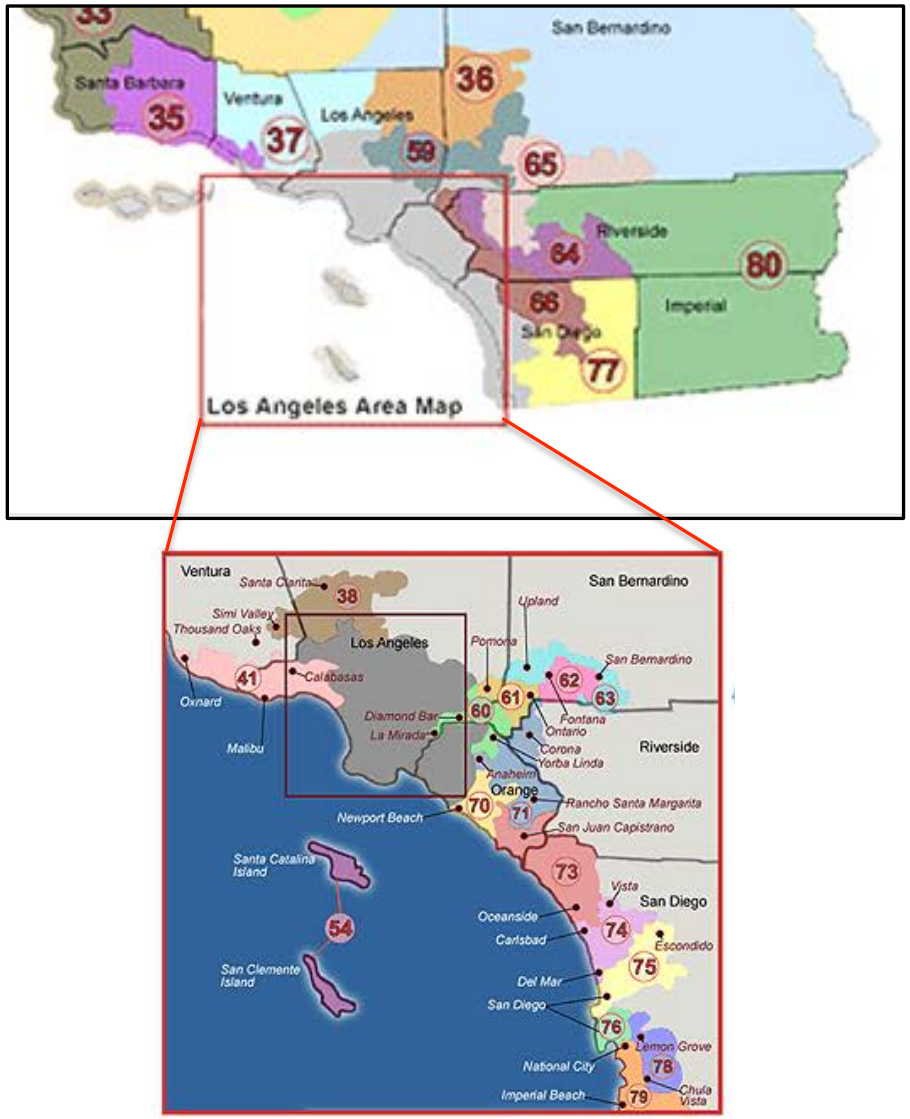


Figure 24. State Assembly Districts in Southern California. This image shows the state assembly districts in the Southern part of California (California Legislature Districts, 2012).

Appendix E: Overall Statistical Output and Histograms

The following descriptive statistics and histograms show the overall distribution of data. Should statistical output and histograms for each of the clusters is of interest, please contact the researcher for use of data.

Table 11. Overall Descriptive Statistics of Bill Data. This table shows the overall data output for the 230 sample size, showing means for party affiliation, wetland presence, re-election, and modes for bill topic and bill status.

Overall Descriptive Statistics of Bill Data

		Party Affiliation	Presence of Wetlands in District	Re-election	Party Affiliation	Presence of Wetlands in District	Re-election	Bill Topic	Bill Status #
N	Valid	230	230	230	230	230	230	230	230
	Missing	0	0	0	0	0	0	0	0
Mean		1.47	1.53	1.46	.67	.58	.55	10.17	7.85
Median		1.00	1.00	1.00	.00	.00	.00	9.00	10.00
Mode		1	1	1	0	0	0	7	11
Std. Deviation		.951	.685	.684	1.212	.962	.937	6.268	3.349
Minimum		1	1	1	0	0	0	1	3
Maximum		4	3	3	4	3	3	24	11
Percentiles	25	1.00	1.00	1.00	.00	.00	.00	6.00	4.00
	50	1.00	1.00	1.00	.00	.00	.00	9.00	10.00
	75	2.00	2.00	2.00	1.00	1.00	1.00	14.25	11.00

Table 12. Overall Bill Topic. This table shows the overall bill topic data output for the 230 sample size, showing the top three bill topics: Budget, Water and Land Use.

Overall Bill Topic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	4.3	4.3	4.3
	2	12	5.2	5.2	9.6
	3	19	8.3	8.3	17.8
	4	8	3.5	3.5	21.3
	5	5	2.2	2.2	23.5
	6	8	3.5	3.5	27.0
	7	36	15.7	15.7	42.6
	8	9	3.9	3.9	46.5
	9	17	7.4	7.4	53.9
	10	24	10.4	10.4	64.3
	11	4	1.7	1.7	66.1
	12	1	.4	.4	66.5
	13	8	3.5	3.5	70.0
	14	12	5.2	5.2	75.2
	15	2	.9	.9	76.1
	16	12	5.2	5.2	81.3
	17	5	2.2	2.2	83.5
	18	9	3.9	3.9	87.4
	19	2	.9	.9	88.3
	20	3	1.3	1.3	89.6
	21	12	5.2	5.2	94.8
	22	2	.9	.9	95.7
	23	6	2.6	2.6	98.3
	24	4	1.7	1.7	100.0
	Total	230	100.0	100.0	

Table 13. Overall Bill Status. This table shows the overall bill status data output for the 230 sample size, showing the 96 bills that were chaptered into law versus the remaining 134 failed bills.

Overall Bill Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	44	19.1	19.1	19.1
	4	24	10.4	10.4	29.6
	5	9	3.9	3.9	33.5
	6	7	3.0	3.0	36.5
	7	17	7.4	7.4	43.9
	8	5	2.2	2.2	46.1
	9	4	1.7	1.7	47.8
	10	24	10.4	10.4	58.3
	11	96	41.7	41.7	100.0
	Total	230	100.0	100.0	

Overall Author Party Affiliation

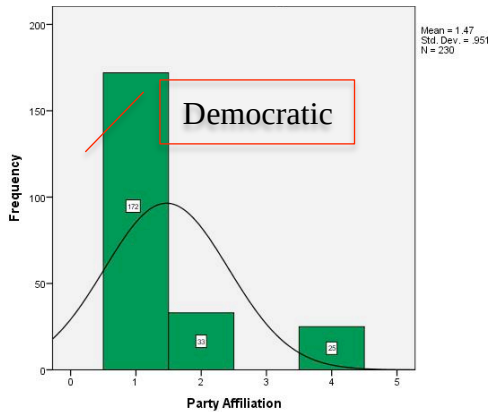


Figure 25. Overall Author Party Affiliation. Overall, bill author party affiliation resulted in 172 democratic members, 33 republican members, 0 independent members, and 25 committees.

Overall Author Re-election Status

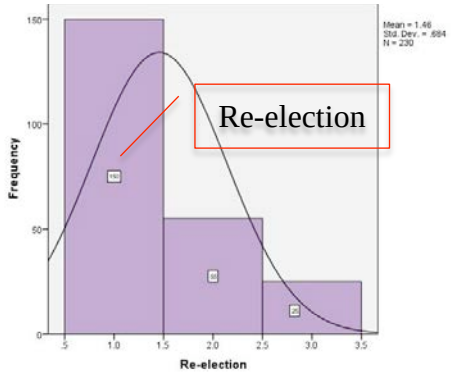


Figure 26. Overall Author Re-election Status. Author re-election resulted in 150 yes, 55 no, and 25 committee authors where this variable was not applicable.

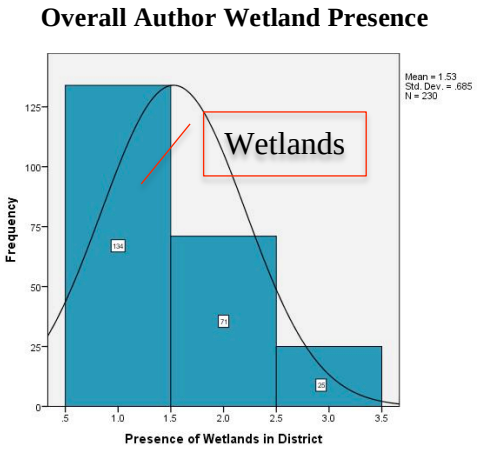


Figure 27. Overall Author Wetland Presence. Wetland presence in the author's district resulted in 134 yes, 71 no, and 25 committee authors where this variable was not applicable.

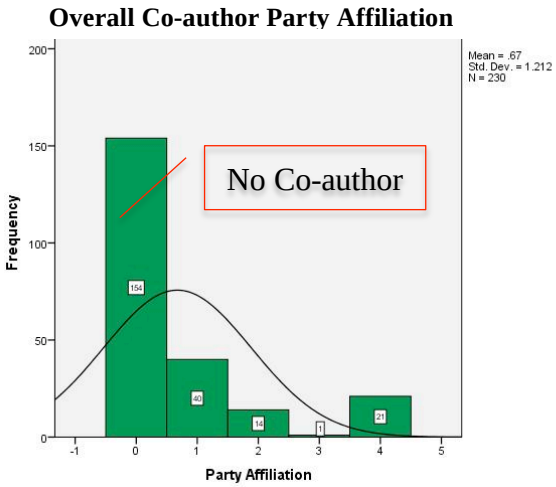


Figure 28. Overall Co-author Party Affiliation. The most common co-author status was no co-author (154), followed by 40 democratic co-authors, 14 republican co-authors, 1 Green Party co-author member, and 21 cases that had 3 or more co-authors.

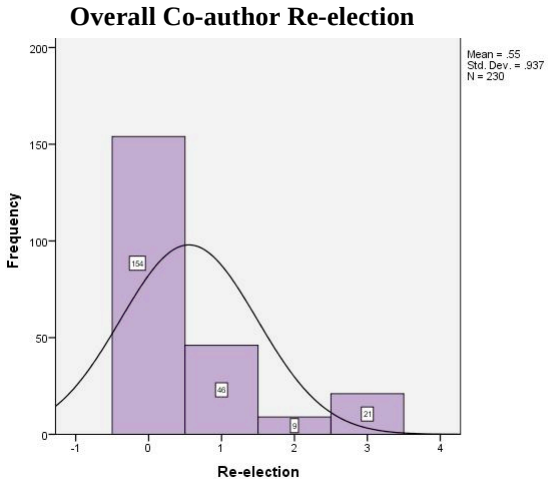


Figure 29. Overall Co-author Re-election. The most common co-author re-election status was no co-author (154), followed by 46 seeking re-election, 9 not seeking re-election, and 21 cases that had 3 or more co-authors and this variable did not apply.

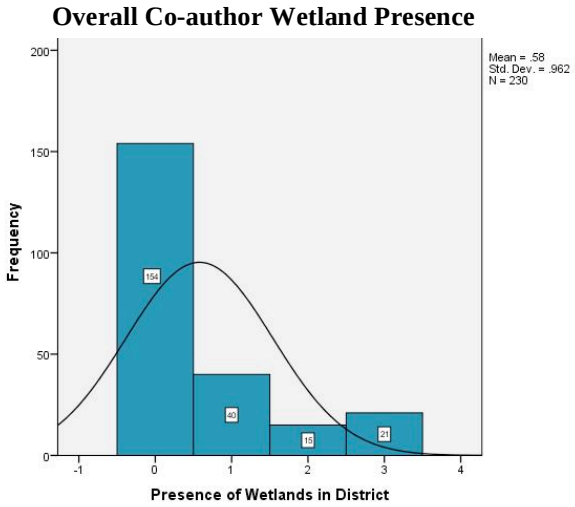


Figure 30. Overall Co-author Wetland Presence. The most common co-author wetland presence status was no co-author (154), followed by 40 with wetlands, 15 without wetlands, and 21 cases that had 3 or more co-authors and this variable did not apply.

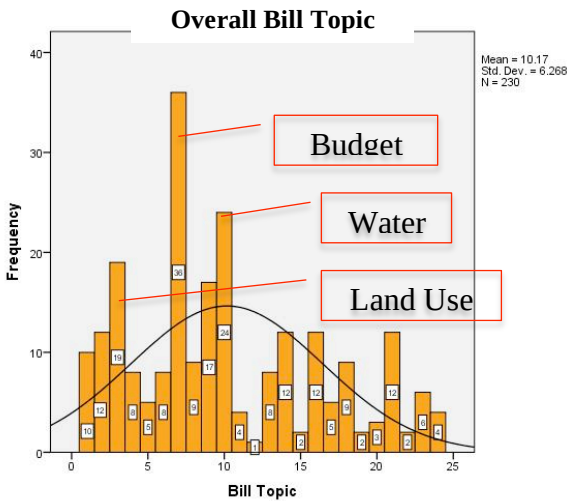


Figure 31. Overall Bill Topic. The most common bill topics were budget (36), water (24), and land use/ property acquisition (19).

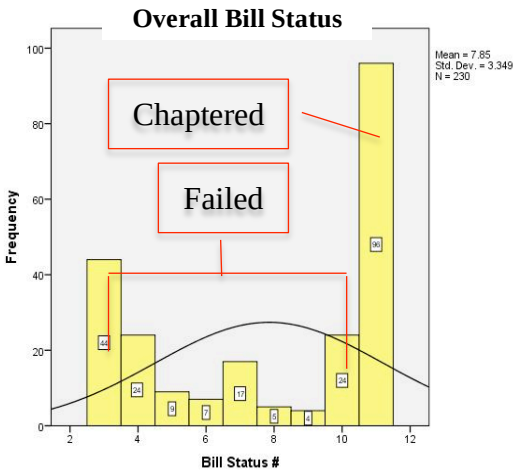


Figure 32. Overall Bill Status. A total of 134 bills did not pass through the legislative process. 96 bills were chaptered into law.

End of Research Design.