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# California's War Over the Bay-Delta: Historic Failures and Current Battles

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**CLAREMONT McKENNA COLLEGE**

**CALIFORNIA'S WAR OVER THE BAY-DELTA:  
HISTORIC FAILURES AND CURRENT BATTLES**

SUBMITTED TO

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AND

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BY

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FOR

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## **Chapter 1: Introduction**

From California's humble beginnings to its status now as the most populated state in America, the acquisition and distribution of water has always played a key role in the state's development. Whether that water comes from California or is outsourced from another state, California possesses one prize of water that has been the center of agricultural, environmental, and economic contention for several decades. The Bay-Delta, which is comprised of the Sacramento-San Joaquin River Delta and San Francisco Bay, is the second largest estuary in the United States.<sup>1</sup> Dating back to the gold rush, the Central Valley has always been coveted for its ideal geographic location right beside rivers that would flood during wet seasons into the land, producing some of the richest, most fertile soil in the West.<sup>2</sup> However, precipitation and the areas that would flood were never consistent. This eventually led settlers to build flood control projects, levee systems, and dams in the early 20<sup>th</sup> century that allowed water to be captured, so that agriculture could prosper. Unfortunately, the Delta started to face supply problems as early as 1920 when populations in both Northern and Southern California were rising exponentially in proportion to the expansion of agriculture.<sup>3</sup> Reclamation and eventual restoration became the primary goals for the Delta in the 20<sup>th</sup> Century, although more water continued to be pumped out of it. The competing water interests between the north

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<sup>1</sup> California Department of Fish and Game, "WAP – Bay Delta & Central Valley – Overview," [http://www.dfg.ca.gov/wildlife/wap/region-bay\\_delta-central\\_valley.html](http://www.dfg.ca.gov/wildlife/wap/region-bay_delta-central_valley.html) (accessed April 14, 2012).

<sup>2</sup> Hundley, Jr., Norris, *The Great Thirst: Californians and Water--A History*. Rev. ed. (Berkeley: University of California Press, 2001), 234-35.

<sup>3</sup> Ibid, 237-40.

and south, agriculture and environmentalists, are now better described as California's "water wars".<sup>4</sup>

Today, tensions are higher than ever as Southern California continues to grow and demand water from the Delta, agriculture suffers from drought and less-than-promised water allocations, and aquatic life diminishes due to environmentally damaging processes like pumping and exporting of water elsewhere. In 1994, two years after a six-year drought that sent all of the Central Valley into panic, the CALFED Bay-Delta Program was created.<sup>5</sup> Stakeholders and governmental agencies came together to develop a set of water quality standards and the Bay-Delta Accord, an agreement to work towards solutions for improving the Delta and its water supply.<sup>6</sup> Unfortunately, CALFED never fully accomplished its goals of Delta reform. Within 10 years, California had to once again evaluate how to address issues in the Bay-Delta because there were no measurable results from CALFED. What California ended up having in hand at the end of 10 years was primarily a disorganized handful of reports and proposals that were never pushed to implementation. As admirable as CALFED was for its intentions to save the Delta, it lacked the leadership necessary to achieve real results. Additionally, the lack of agreement amongst stakeholders made the possibility of implementation more difficult. Despite an attempt to refocus CALFED from 2005-2006, movement was still slow with no immediate, practical solutions, especially when another drought hit from 2007-2009. Californians' patience wore thin; it was time for a change. CALFED saw its death in

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<sup>4</sup> Morris, Bob, "California Water Wars Spotlight: San Joaquin Valley," Independent Voter Network (IVN) - Non-Profit Unfiltered Political News. <http://ivn.us/2012/03/21/water-wars-central-valley-focus/> (accessed April 14, 2012). *This is just one example of the numerous articles highlighting the Delta region as one of the main battlegrounds for the water wars.*

<sup>5</sup> CALFED Bay-Delta Program Archived Website, "History of CALFED Bay-Delta Program," <http://calwater.ca.gov/calfed/about/History/Detailed.html> (accessed April 14, 2012).

<sup>6</sup> Ibid.

2009 when the Delta Stewardship Council was formed. This new, smaller council of legislators vow to put forth the Delta Plan, a comprehensive Delta-management proposal intended to be law when completed.<sup>7</sup> Part of the Delta Plan proposes conservation strategies for the Bay-Delta; this proposal that has been separately prepared by various agencies is called the Bay-Delta Conservation Plan (BDCP). In addition to explaining the reasons why CALFED failed, this paper will take a specific focus on what the BDCP proposes, the potential impacts, criticism and support for the plan, and an analysis of its potential to resolve issues in the Delta.

Apart from the work of state and local agencies on the Bay-Delta Conservation Plan, a few members of the House of Representatives are taking their ideas for Delta reform to the federal level. On May 11, 2011, Congressman Devin Nunes (CA-21) introduced in the House his bill (H.R. 1837) entitled “The Sacramento-San Joaquin Valley Reliability Act”.<sup>8</sup> Nunes and his co-sponsors, Jeff Denham and Kevin McCarthy, are all representatives of districts in the Central Valley, specifically counties south of the Delta where agriculture is a mainstay of the economy. After watching their constituencies face the harsh drought that ended in 2009, these Congressmen could stand by no longer to wait for another potentially unproductive plan, like CALFED, to rob their counties of their needed water allocations. Unlike the Delta Stewardship Council’s establishment as an improved CALFED committee, H.R. 1837 aims to improve upon previous federal legislation. The Central Valley Project Improvement Act (CVPIA) and San Joaquin River

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<sup>7</sup> Delta Stewardship Council, "How does the Delta Stewardship Council differ from previous efforts – such as CALFED – to manage the Delta?" <http://deltacouncil.ca.gov/faq/12-how-does-delta-stewardship-council-differ-previous-efforts-%E2%80%93-such-calfed-%E2%80%93-manage-delta> (accessed April 14, 2012).

<sup>8</sup> "Bill Summary & Status - 112th Congress (2011 - 2012) - H.R.1837 - All Congressional Actions," THOMAS (Library of Congress), <http://thomas.loc.gov/cgi-bin/bdquery/z?d112:HR01837:@@X> (accessed April 14, 2012).

Restoration Settlement Act were passed in Congress in 1992 and 2009, respectively.<sup>9 10</sup>

Both laws intended to address the environmental impacts of the Central Valley Project on fish and wildlife habitats. The San Joaquin River Restoration Settlement Act falls under the CVPIA's San Joaquin River Restoration section, but now comes under fire by HR 1837. After several years of investment into the restoration, habitats are still in danger and farmers are without enough water. H.R. 1837 proposes to nullify the river settlement and also heavily amend the CVPIA. Following the section on the Bay-Delta Conservation Plan, this paper will also present in detail what H.R. 1837 proposes, its potential impacts, public reception of the bill, and an analysis of how effective a solution it may be to water transfer issues in the Delta.

Though there may currently be other proposals for improving the Delta, H.R. 1837 and BDCP will be the focus here because they are two of the most widely publicized and heavily discussed Delta plans in 2012. Both also take a similar focus on reforming previous legislation pertaining to water transfers and habitat preservation, but a side-by-side comparison of the two plans reveal stark differences and conflicts between them. There is a lot of criticism and support for both plans, making them each extremely contentious. When examined together, USGS foresees the efforts of the BDCP being futile, if H.R. 1837 is passed into law because H.R. 1837 would preempt state laws and

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<sup>9</sup> "Bill Summary & Status - 102nd Congress (1991 - 1992) - H.R.429 - All Congressional Actions," THOMAS (Library of Congress), <http://thomas.loc.gov/cgi-bin/bdquery/z?d102:HR00429:@@X> (accessed April 14, 2012). *The CVPIA was passed within this Reclamation law on 10/30/1992.*

<sup>10</sup> "Bill Summary & Status - 111th Congress (2009 - 2010) H.R.146 All Congressional Actions." THOMAS (Library of Congress), <http://thomas.loc.gov/cgi-bin/bdquery/D?d111:3:/temp/~bdxjqP:@@Xl/home/LegislativeData.php?n=BSS;c=111l> (accessed April 14, 2012). *Despite being a court settlement that was reached in 2006, the San Joaquin River Restoration Settlement Act was a bill that was not passed for implementation until the "Omnibus land bill" was passed into law on 3/30/2009. This law included the settlement, which is now brought back into questioning through HR 1837.*



override foundational environmental regulations already in place like the Endangered Species Act.<sup>11</sup> This issue leads to bigger questions. Will the commonly-deemed “water wars” over the Delta ever end? Can H.R. 1837 or the BDCP offer a balanced solution?

Based on past record, finding an effective solution for the Bay-Delta may not be as simple as what H.R. 1837 or the BDCP present. For decades, attempts to deal with the Delta have been met with indecision and lack of clarity when it comes to where water goes and how much of it goes there. Every year’s water supply is different, so a comprehensive solution needs to handle that unpredictability, but also be fair in allocations of water. Some scholars, later discussed in this paper, argue over whether or not the Delta is a zero-sum game, also known as a situation where one person’s gain results in a proportional loss from another, thus creating a net change of zero. Ultimately, the benefit or loss from the situation is dependent on how stakeholders perceive the change. California will never find out if the Delta is a zero-sum game if stakeholders cannot cooperate to find one solution. Instead today, there are competing proposals that extend the political debate over the Delta and put the estuary into deeper ecological risk as time passes. Despite some of the promising suggestions in H.R. 1837 and the Bay-Delta Conservation Plan, the Delta will remain a problem in the 21<sup>st</sup> century until stakeholders from all perspectives compromise enough to enact a cooperative, clear-cut solution.

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<sup>11</sup> Connor, Michael, "HR 1837, San Joaquin Valley Water Reliability Act," Bureau of Reclamation Website. <http://www.usbr.gov/newsroom/testimony/detail.cfm?RecordID=1961> (accessed April 14, 2012).

## **Chapter 2: History of Delta Development and the Failure of CALFED**

The story of how the Delta's problems have gotten to be so deep-rooted dates back to the mid-1800s, just before California's admittance to the Union. Since the very beginning, the Delta has played a central role in California's growth. This section gives a synopsis and explains the important highlights of how the Delta was tamed into California's life source of water, energy, agriculture, and economy; and how the abuse and overuse of the Delta has forced California to seek and try out solutions – like the Central Valley Project Improvement Act and the CALFED Bay-Delta Plan – for restoring the health of the estuary.

### ***From 1848 to the Great Depression: Reclamation and the Rise of California***

Though the gold rush in 1848 was what led thousands of people to come to California, the water in the Delta was what led them to settle there. Most people did not strike gold, but the moist and fertile soil of the Central Valley showed promise of agricultural prosperity. After California became an official state in 1850, the passage of the Swamplands Act gave states possession of swamplands for the purpose of reclamation.<sup>1</sup> Sales of these lands to individuals began in 1858, with around 500,000 acres available in the Delta.<sup>2</sup> Although there was initially acreage limits to how much land one could acquire, much lobbying from landowners and wealthy prospective buyers convinced the state to repeal acreage limits in 1868. That led to a huge spike in acres

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<sup>1</sup> Lund, Jay R., *Envisioning futures for the Sacramento-San Joaquin Delta*, (San Francisco: Public Policy Institute of California, 2007), 19-20.

<sup>2</sup> Ibid, 20.

reclaimed from 15,000 acres during the decade 1860-1870, to 92,000 acres during 1870-1880.<sup>3</sup> The Delta's Reclamation Era continued until the 1930s, during which the last tract of land was reclaimed in 1934.<sup>4</sup> During these 70 years of reclamation, new landowners found themselves battling nature and its unpredictable floods and droughts. In order to keep their lands fertile, people began to construct machinery and levees for relief. These creations captured water, protected lands from being inundated, and pumped water to drier lands. Agriculture began to gain momentum with this new found control over water and the federal government eventually supported landowners and farmers by funding levee projects through legislation like the Federal Flood Control Act of 1928.<sup>5</sup> In 1900, there were 73,000 farms in California; by 1935, that number increased to over 150,000.<sup>6</sup> Against the unpredictability of the arid West, California cultivated one of the most productive lands for the U.S. agricultural economy. However, as reclamation slowed and growth hit its peak, problems began to surface in the Delta.

Beginning in the early 1900s, the Delta faced salinity problems and land subsidence, which the U.S. Geological Survey describes to be a land drop that occurs when "large amounts of ground water have been withdrawn from certain types of rocks" that then fall on themselves.<sup>7</sup> Drought, water exports, and mining projects caused salt intrusion that eventually became unbearable for agriculture in the Delta. The 1920s marked the first lawsuits for excessive diversions of water that led to high salinity in

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<sup>3</sup> Ibid, 21.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid, 25.

<sup>6</sup> Hundley, Jr., Norris, *The Great Thirst: Californians and Water--A History*. Rev. ed. (Berkeley: University of California Press, 2001), 240.

<sup>7</sup> "Land subsidence, USGS Water Science for Schools," USGS Georgia Water Science Center, <http://ga.water.usgs.gov/edu/earthgwlandsubside.html> (accessed April 15, 2012).

Delta waters.<sup>8</sup> This led to the engineering of solutions for salinity problems. The same overuse of the Delta triggered land subsidence, although reclamation itself was the initial cause. Material that was used to elevate levees came from within the land itself, so reclaimed islands became lower and levees were instable because they were built so quickly, without sound engineering principles. Farming techniques such as weed control and fertilization required more subsidence, which in turn also created salinity problems.<sup>9</sup> These problems eventually called for state and federal action through a comprehensively planned program to capture water runoff and distribute it up and down California, as needed. In 1919, Robert B. Marshall proposed a bold plan:

*“His ‘Marshall Plan’ called for a large dam on the upper Sacramento River and two aqueducts for varying distances on either side of the Central Valley to reclaim vast sections of the Sacramento and especially San Joaquin valleys from their current waterless or low-water conditions, to provide water to San Francisco Bay cities, to improve the navigability of the Sacramento River, and to prevent saltwater intrusion into the Delta.”<sup>10</sup>*

It was a brilliant plan for which Marshall never got his due credit; the proposal was rejected 3 times by voters and the California Senate for its hefty \$800 million price tag.<sup>11</sup> For a decade, Californians whined for a plan of this magnitude, but did not move forward with it because the state had to resolve riparian law issues first. Creating a state water plan hinged on the establishment of water rights, which California decided, in 1928, meant a riparian had to put water into “reasonable beneficial use” in order to not have water re-appropriated elsewhere.<sup>12</sup> This mandate cleared the way for the state to appropriate unused water for comprehensive water projects. In 1931, State Engineer

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<sup>8</sup> Lund, 28.

<sup>9</sup> Lund, 29.

<sup>10</sup> Hundley, 243.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid, 245.

Edward Hyatt released a state water plan similar to Marshall's, but with better engineering detail and a lower cost.<sup>13</sup> The \$500-\$600 million dollar proposed similar projects like a dam on the Sacramento River and an aqueduct to bring more water to Southern California. Despite the release of the plan coinciding with the Great Depression, it was passed in California in 1933.<sup>14</sup> Because the plan showed economic promise coming out of the Depression through job creation, President Franklin D. Roosevelt released funds to start the construction of the projects in late 1935. The plan was officially titled the Central Valley Project.<sup>15</sup>

***Late 1930s – 1960s: Shifting from the Central Valley Project to the State Water Project***

The Central Valley Project's (CVP) first project was the Shasta Dam, which construction started for in 1938. Following that, the CVP brought about the completion of "20 dams and reservoirs, 11 power plants, and 500 miles of major canals, as well as conduits, tunnels, and related facilities."<sup>16</sup> These are just a few of the Central Valley Project's several accomplishments in providing fresh water to the San Joaquin Valley, generating power, improving navigation of the Sacramento River, and protecting the Central Valley from water shortages and floods.<sup>17</sup> Salinity management remained a problem for the CVP because levee failures continued and salinity control through the use of dams was not promising beyond the short term.<sup>18</sup> The Central Valley Project proved to be successful overall with most of its dams and facilities still serving their

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<sup>13</sup> Ibid, 246.

<sup>14</sup> Ibid. 252.

<sup>15</sup> Ibid, 255.

<sup>16</sup> "Project details - Central Valley Project." Bureau of Reclamation . [http://www.usbr.gov/projects/Project.jsp?proj\\_Name=Central+Valley+Project](http://www.usbr.gov/projects/Project.jsp?proj_Name=Central+Valley+Project) (accessed April 15, 2012).

<sup>17</sup> Ibid.

<sup>18</sup> Lund, 33.

purposes today, but by the late 1950s, the population boom in California created needs beyond the scope of the project; the state needed another project plan to deliver more water to more of California.

While CVP projects were in progress, many groups in California demanded another state plan because they witnessed the immense growth the state experienced after World War II and knew the allocation of water had to be re-evaluated. After more than a decade of research, public discourse, and formation of special committees, these committees drafted the Burns-Porter Act, which was the product from three years of discussion and compromise.<sup>19</sup> This bill detailed a sub-set of projects to be completed that would eventually provide water to 25 million Californians and irrigate 750,000 acres of farmland.<sup>20</sup> The proposal was invested in the growth of Southern California, so it was a contentious bill between northern and southern interests. However, the bill was put on the November 1960 ballot and approved by a small margin of 174,000 ballots out of 5.8 million, which is a difference of merely three-tenths of a percent.<sup>21</sup> From that point on, the newly passed initiative was named the State Water Project (SWP).

The first phase of the project “aimed to extend water deliveries from northern watersheds to Southern California cities and to farmers in the Tulare Basin that were beyond the reach of the CVP.”<sup>22</sup> However, balancing southern and northern interests was difficult when interested parties of the Delta were concerned with maintaining water quality and low salinity to sustain agriculture. Construction began in 1961 of this project,

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<sup>19</sup> "California State Water Project-History," California Department of Water Resources, <http://www.water.ca.gov/swp/history.cfm> (accessed April 15, 2012).

<sup>20</sup> "California State Water Project," California Department of Water Resources, <http://www.water.ca.gov/swp/index.cfm> (accessed April 15, 2012).

<sup>21</sup> Hundley, 290.

<sup>22</sup> Lund, 33.

the largest undertaking for a water project ever at an estimated total of \$1.75 billion dollars (\$12.7 billion dollars if adjusted for inflation in 2010).<sup>23</sup> Today, the State Water Project includes “34 storage facilities, reservoirs and lakes; 20 pumping plants; 4 pumping-generating plants; 5 hydroelectric power plants; and about 701 miles of open canals and pipelines.”<sup>24</sup> During the construction of these projects in the 1960s, the idea of building a peripheral canal was proposed for the first time, the first of several times to come. This original 1940’s concept proposes the construct of a conveyance line that delivers freshwater from the north to the south. The idea seemed to be the ultimate solution for moving water from Northern California to Southern California. The California Department of Water Resources officially adopted the peripheral canal as part of the SWP in 1966 because it was publicly well-received.<sup>25</sup> The U.S. Bureau of Reclamation released an economic feasibility evaluation of the canal project in 1969 and its endorsement of the project to Congress, but the dawning of public environmental awareness shifted discussion about the Delta and the canal.<sup>26</sup>

### ***Late 1960s – 1987: The Environmental Awakening***

As the State Water Project was picking up momentum, so was public environmentalism. Several environmental protections measures were drafted and passed beginning with the National Wilderness Preservation Act of 1964. Following that, the Endangered Species Act first passed in 1966, with its revised version passing in 1973.

Other relevant policies passed in this period were “the National Wild and Scenic Rivers

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<sup>23</sup> Water Education Foundation , "California State Water Project Slideshow," Aquaforia - The California Water News Blog, <http://aquaforia.com/projects/SWP%20Slideshow> (accessed April 15, 2012), 34, 36.

<sup>24</sup> "California State Water Project," California Department of Water Resources, <http://www.water.ca.gov/swp/index.cfm> (accessed April 15, 2012).

<sup>25</sup> Lund, 35.

<sup>26</sup> Ibid.

Act (1968), the National Environmental Policy Act (1969), the Clean Water Act (1972), and the Safe Drinking Water Act (1974).”<sup>27</sup> The formation of these laws began to shape public attitude towards the environment. Specifically in the Delta, aquatic species and wildlife became the spotlight with heavy public interest in protecting them. Previous conversations about the peripheral canal were quickly forgotten because there was a demand for certainty in its environmental impacts, not just the claimed “intangible environmental benefits”.<sup>28</sup> New reports on the canal had to be produced in line with new environmental regulations, but a 1970 U.S. Geological Survey report and a 1973 Department of Fish and Game report indicated concern over potential reduction in Delta flows.<sup>29</sup> Despite the efforts of the Department of Water Resources to put out an environmental impact report in 1974 for a slightly modified version of the 1969 peripheral canal proposal, environmental groups had already publicly exposed the project for its potential harm to the environment. Before the environmental impact report’s release, a student discovered a preliminary task force report on the canal by the U.S. Environmental Protection Agency that condemned the project and recommended that “north coast water development for export should not be allowed.”<sup>30</sup> The student shared this report with the environmentalist organization “Friends of the Earth”; environmentalists quickly made this information public as part of a larger movement to ensure that the canal would never be built.<sup>31</sup> Through years of complaints and lawsuits, environmentalists and Northern water right holders successfully convinced California to

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<sup>27</sup> Ibid, 36.

<sup>28</sup> Ibid, 35.

<sup>29</sup> Ibid, 37.

<sup>30</sup> Jackson, W. Turrentine, and Alan M Paterson , "The Sacramento-San Joaquin Delta: The Evolution and Implementation of Water Policy: An Historical Perspective," (*Technical Completion Reports* W-501, 1977), 157-58.

<sup>31</sup> Ibid.



reject the peripheral canal proposal on a veto referendum in 1982, after Governor Jerry Brown had signed it into law in July 1980.<sup>32</sup> This was a huge victory for Northern water users. The next five years marked a period of steady growth in California's concern with the environmental health of the Delta; in the meantime, performance in agriculture also remained steady until 1987.

***1987-1994: Drought, Central Valley Project Improvement Act, and Bay-Delta Accord***

Drought hit California beginning in the water year 1987 (October 1, 1986 - September 30, 1987) and continued for six years through 1992.<sup>33</sup> Because 1986 was a wet water year, the impacts did not hit immediately in 1987; however, the drought crept up on California so quickly that the Department of Water Resources established a Drought Information Center in 1988.<sup>34</sup> While this was not the worst drought California had ever experienced, the San Joaquin and Sacramento River Basins each suffered their worst droughts on record. On April 5, 1988, San Joaquin County was the first county to declare a state of drought emergency.<sup>35</sup> Agriculture began to decline and a statewide drought was declared 14 days later by the Department of Water Resources Director, David Kennedy.

Serious conservation and reduction measures had to be implemented statewide, which impacted the Delta in agriculture, fish and wildlife habitats, and economic well-being. By 1990, all three of these areas experienced enormous reductions in water. The State Water Project reduced water deliveries to agriculture by 50 percent; according to economists in the Department of Water Resources, 1990's drought period alone cost

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<sup>32</sup> Hundley, 326, 331-32.

<sup>33</sup> Dziegielewski, Benedykt, Hari P. Garbharran, and John F. Langowski, *Lessons learned from the California drought (1987-1992)*, (Fort Belvoir, VA.: The Institute for Water Resources, Water Resources Support Center - U.S. Army Corps of Engineers, 1993), 69.

<sup>34</sup> Ibid, 70.

<sup>35</sup> Ibid, 76.

\$455 million dollars to agriculture.<sup>36</sup> Given that a majority of agricultural activities revolved around the Delta and significant amounts of land had to be fallowed, this cost undoubtedly affected the economy. Similar cuts were made to cities with water supplies from the Central Valley Project; most cities experienced 25-50 percent in reduced supply from the project.<sup>37</sup> Both of these cuts negatively affected the economy as farmers produced less and residents received less water. Reductions in water for fish and wildlife habitats occurred naturally through the drought, but the negative impacts went unnoticed until 1990 when the Delta smelt began to attract attention. In the summer of 1990, there was controversy over whether or not the Delta smelt should be listed as a threatened species, under the Endangered Species Act because the Department of Water Resources and the Fish and Game Commission rejected the initial recommendation.<sup>38</sup> However, environmentalists continued to push back and finally received the recognition they demanded when the Delta smelt was approved for listing under threatened species by the U.S. Department of Interior in September 1991.<sup>39</sup> Several other species became at risk from the moment the drought started, but it was not until years later that the Department of Water Resources was able to realize “that the most severe impacts of the drought have been on the environment and the fish and wildlife”.<sup>40</sup> Unlike the quicker recoveries of agriculture and economic health, these environmental impacts were soon discovered to be longer-lasting and harder to recover from because the state lacked a concrete plan for restoration.

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<sup>36</sup> Ibid, 86.

<sup>37</sup> Ibid.

<sup>38</sup> Ibid, 82.

<sup>39</sup> Ibid, 89.

<sup>40</sup> Ibid, 118.

In the heat of the six-year drought, a congressman of a bordering district to the Delta could not idly watch the declining ecosystem and water quality of the estuary any longer, so he took action. Congressman George Miller, who represented the Contra Costa County portion of the Central Valley, put forth a series of “fish bills” that he and his staff drafted between 1989 and 1991.<sup>41</sup> The target of these bills was to make restoration a priority of the Central Valley Project, which was the only large-scale federal water project in California without much consideration of its impacts on fish and wildlife.<sup>42</sup> Most of them did not make it pass the mark-up stage, but years of patience and proactive rallying of support eventually paid off. In October 1992, the Central Valley Project Improvement Act (CVPIA) was signed into law as part of the Reclamations Projects Authorization and Adjustment Act of 1992.<sup>43</sup> The following is a summary by the U.S. Bureau of Reclamation of the key changes to the CVP through the CVPIA:

*“800,000 acre-feet of water dedicated to fish and wildlife annually; tiered water pricing applicable to new and renewed contracts; water transfers provision, including sale of water to users outside the CVP service area; special efforts to restore anadromous fish population by 2002; restoration fund financed by water and power users for habitat restoration and enhancement and water and land acquisitions; no new water contracts until fish and wildlife goals achieve; no contract renewals until completion of a Programmatic Environmental Impact Statement; terms of contracts reduced from 40 to 25 years with renewal at the discretion of the Secretary of the Interior; installation of the temperature control device at Shasta Dam; implementation of fish passage measures at Red Bluff Diversion Dam; firm water supplies for Central Valley wildlife refuges; and development of a plan to increase CVP yield.”<sup>44</sup>*

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<sup>41</sup> Beard, Daniel P, and Malca Chall, *The passage of the Central Valley Project Improvement Act, 1991-1992: the role of George Miller*, (Berkeley, Calif.: Regional Oral History Office, the Bancroft Library, University of California, 1996), 12.

<sup>42</sup> Ibid, 13.

<sup>43</sup> "Bill Summary & Status - 102nd Congress (1991 - 1992) H.R.429 CRS Summary," THOMAS (Library of Congress), <http://thomas.loc.gov/cgi-bin/bdquery/D?d102:1:./temp/~bdxnb6:@@D&summ2=m&l/home/LegislativeData.php?n=BSS;c=1021> (accessed April 12, 2018).

<sup>44</sup> "Reclamation MP Region CVPIA homepage," Bureau of Reclamation, <http://www.usbr.gov/mp/cvpia/index.html> (accessed April 18, 2012).

This was the biggest legislative victory for restoring the Delta since the start of its reclamation in the mid-1800s; to the relief of many, restoration was finally a top priority. Immediately after the CVPIA passed as law, restoration efforts began and the necessary water promised in the act was directed to fish and wildlife.<sup>45</sup> However, now that environmental interests also became a top priority of the Delta, there was instantly tension among the many stakeholders—specifically the urban, agricultural, and environmental interests of the Bay-Delta. If the amount of water given to habitat restoration increased and the amount of water in the Delta remained steady, at best, how much less water would urban and agricultural needs receive? This was not a question that anyone was about to answer because stakeholders would ideally not have to give up any water, despite new allocations to restoration projects.

For the two years after the passage of the CVPIA, environmentalists, agricultural and urban water users agreed to collaborate and “find common ground” in protecting the Bay-Delta, but also ensure sufficient supply to all parties.<sup>46</sup> State agencies, officials, Secretary of Interior Bruce Babbitt, and four federal agencies also united to create water quality standards and a plan for long-term harmonized use and restoration of the Delta. In June 1994, these state and federal groups agreed to collaborate in finding an overall solution for the Delta. This marked the formation of the California Water Policy Council and Federal Ecosystem Directorate (CALFED), which consisted of state and federal agencies along with representatives of all stakeholders. CALFED worked for six months

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<sup>45</sup> "Central Valley Project Improvement Act - 10 Years of Progress," U.S. Bureau of Reclamation, [http://www.usbr.gov/mp/cvpia/docs\\_reports/docs/cvpia\\_10yr\\_progress\\_final\\_summ\\_rpt.pdf](http://www.usbr.gov/mp/cvpia/docs_reports/docs/cvpia_10yr_progress_final_summ_rpt.pdf) (accessed April 18, 2012), 7.

<sup>46</sup> CALFED Bay-Delta Program Archived Website, "History of CALFED Bay-Delta Program," <http://calwater.ca.gov/calfed/about/History/Detailed.html> (accessed April 14, 2012).

on a proposal that would set standards for water quality and transfers. In December of 1994, all of these parties came together and signed what is now known as the Bay-Delta Accord.<sup>47</sup> The water wars appeared to reach a peaceful end. The agreement, enforced over the next three years, set varying maximum restrictions on water exports from the Delta depending on the time of year, guaranteed a reliable supply of water for the three main groups of stakeholders, ensured real time monitoring of water levels, and promised to comply with all environmental regulations through restoration efforts.<sup>48</sup> The most compromising clause in the agreement was the guarantee that all water needs would be met without needing additional water from the Delta, but how would this be done?

*“Additional water needs will be provided by the Federal government on a willing seller basis financed by Federal funds, not through additional regulatory re-allocations of water within the Bay-Delta”<sup>49</sup>*

This was a four-year temporary and potentially expensive solution, but the signing of the Bay-Delta Accord launched a long-term planning process through the CALFED Bay-Delta Plan; this was the plan that appeared to be the answer to California’s Water Wars. While it was full of good intentions—collaboration, compromise, and complete Delta reform—the plan eventually could not meet its overly ambitious goals.

### ***The Rise and Fall of CALFED – Right Intentions, Poor Implementation***

After the signing of the Bay-Delta Accord in 1994, the numerous<sup>50</sup> state and federal agencies that comprised of the CALFED group spent the next five years drafting

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<sup>47</sup> "Principles for Agreement on Bay-Delta Standards between the State of California and the Federal Government," CALFED Bay-Delta Program Archived Website, <http://www.calwater.ca.gov/content/Documents/library/SFBayDeltaAgreement.pdf> (accessed April 18, 2012).

<sup>48</sup> Ibid.

<sup>49</sup> Ibid, 2.

the programmatic plan containing its environmental impact statement and report (EIS/EIR).<sup>51</sup> During this period, Congress approved the development of the CALFED program in 1996 along with \$143 million dollars of funding per year for FY1996 to FY2000.<sup>52</sup> CALFED also released its draft Phase I report that outlines primary programs and three possible solutions.<sup>53</sup> A preliminary second draft of the report containing Phase II was released to the California State Senate in March of 1998.<sup>54</sup> For the sake of legislative oversight, the California State Senate passed a resolution to create the Senate Select Committee on the CALFED Bay-Delta Program in April of 1998.<sup>55</sup> In 1999, the primary agencies who prepared the report publicly released another draft of the plan and opened a three-month period for public comment.<sup>56</sup> The CALFED Bay-Delta Program's draft report received thousands of comments, 10,000 of which are impressively addressed in a three-volume Response to Comments document.<sup>57</sup> The report went back for revision and the Final Programmatic EIS/EIR was released in July 2000. The Record of Decision for the finalized CALFED Bay-Delta Program was signed in August 2000 and promised to be "the largest, most comprehensive water management program in the world."<sup>58</sup>

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<sup>50</sup> There were initially 13 agencies in collaboration, 12 signed on later for a total of 25 when CALFED began implementation.

<sup>51</sup> "Final Programmatic Environmental Impact Statement/Environmental Impact Report - The Introduction," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/library/July2000\\_EIS\\_EIR/301/301\\_intro.pdf](http://calwater.ca.gov/content/Documents/library/July2000_EIS_EIR/301/301_intro.pdf) (accessed April 18, 2012).

<sup>52</sup> Sheikh, Pervaze A., and Betsy A. Cody, *CALFED Bay-Delta Program overview of institutional and water use issues*, (Washington, D.C.: Congressional Research Service, Library of Congress, 2005), 16.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Johannessen, K. Maurice, *Chairman's interim report of the Senate Select Committee on the CALFED Water Program*, (Sacramento: Senate of the State of California, 1998),

<sup>56</sup> Ibid.

<sup>57</sup> "How to Use the Response to Comments Document," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/library/July2000\\_EIS\\_EIR/how.pdf](http://calwater.ca.gov/content/Documents/library/July2000_EIS_EIR/how.pdf) (accessed April 19, 2012).

<sup>58</sup> *Programmatic record of decision*. (Sacramento, Calif. CALFED Bay-Delta Program, 2000), 1.

### Main Topics and Goals of CALFED

There were four primary objectives of the CALFED Bay-Delta Program listed in its programmatic report and agreed upon in the Record of Decision: water supply reliability, water quality, ecosystem restoration, and levee system integrity.<sup>59</sup> Other interrelated major program elements included governance of the Bay-Delta, watersheds, storage, conveyance, an Environmental Water Account, water use efficiency, water transfers, and science.<sup>60</sup> The program set large goals in each of these objectives aggregating to an estimated cost of \$10 billion dollars over 30 years of implementation, with \$8.7 billion needed during the first seven years (Stage 1); CALFED expected approximately equal proportions of funding to come from the federal, state, and local level.<sup>61</sup> The Programmatic Record of Decision elaborates on plans for each objective. The CALFED plan's main mission was to address *all* of the problems the Delta faced and appease all stakeholders, thus explaining the widespread number of goals. The following list briefly describes the long-term plan of action for each objective in the order that the Programmatic Record of Decision presented them.

***Governance:*** establishment of a Federal-State Commission for oversight in implementation with members from various state and federal agencies

***Ecosystem Restoration:*** comprehensive Ecosystem Restoration Program (ERP) with over 600 programmatic actions for Bay-Delta that would require \$1 billion dollars from various funding sources

***Watersheds:*** implement the CALFED Watershed Program, which would promote local watershed management to achieve improved water supply, flood management, ecosystem restoration, and water quality

***Water Supply Reliability:*** improvement of water supply reliability alongside restoration efforts would be met by storage, conveyance, and Environmental Water Account plans below

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<sup>59</sup> CALFED Bay-Delta Program Archived Website, "History of CALFED Bay-Delta Program," <http://calwater.ca.gov/calfed/about/History/Detailed.html> (accessed April 14, 2012).

<sup>60</sup> *Programmatic record of decision*. (Sacramento, Calif. CALFED Bay-Delta Program, 2000), 3-4.

<sup>61</sup> Sheikh and Cody, 10.

**Storage:** expand storage capacity of existing open reservoirs, surface storage sites, and groundwater reservoirs at an estimated cost of \$1.4 billion with funding sources not yet known due to uncertainty and varying plans for projects

**Conveyance:** improve existing canals and export facilities from the State Water Project at an estimated cost of \$1 billion

**Environment Water Account:** acquire, store in bank, transfer, sell, and borrow 380,000 acre-feet of water annually for conveyance purposes to reduce pumping and protect the Bay-Delta ecosystem

**Water Use Efficiency:** create incentive-based program for water conservation and recycling among all stakeholders with a needed initial investment of \$1.5 to 2 billion dollars

**Water Quality:** set and achieve healthy water quality standards by investing in more treatment and desalination technology; allow users to access clean water more easily through delivery and exchange programs; \$950 million needed for stage one, more than half of which would come from state and federal funding and the other half locally

**Water Transfers:** implement the CALFED Water Transfer Program, which would increase facilities for water transfers and lower transaction costs by streamlining permits

**Levees:** implement CALFED Levee System Integrity Program to ensure long-term protection of the Bay-Delta through maintenance of existing levees and rebuilding of broken ones so that salinity in the Delta does not increase and habitats are protected

**Science:** establishment of the CALFED Science Program in order to ensure world-class scientific practices in all elements of the program; initial investment of \$300 million into the program to recruit science board and panel, fuse existing programs with refined evaluation framework and performance measures, and produce annual reports<sup>62</sup>

### Implementation of CALFED in Its First and Final Seven Years

Immediately following the Record of Decision in August 2000, CALFED began to implement Stage 1 of the plan. This section outlines by year a summary of what was accomplished or in progress according to annual reports from 2001 to 2007.

**2001.** In this first year of implementation, the CALFED Bay-Delta Program appeared to be on schedule with \$500 million of secured and allocated funds from mostly state bond funds. While most programs were on schedule or even exceeding expectations,

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<sup>62</sup> *Programmatic record of decision.* (Sacramento, Calif. CALFED Bay-Delta Program, 2000), 31-76.



a few goals had to already be delayed due to a lack of resources. Groundwater storage was an example of an objective exceeding implementation expectations, with \$74 million provided for such projects; however, plans to implement expansion studies on the Shasta and Los Vaqueros Reservoir had to be delayed due to a lack of funding.<sup>63</sup>

**2002.** This year marked a crucial accomplishment in the objective of governance: the 30-member Bay-Delta Public Advisory Committee was created. Members came from a variety of interest groups to provide oversight and recommendations on the implementation of the CALFED plan. Other improvements were made in almost every program area, especially state funds-supported projects in restoration, water recycling, and groundwater storage. However, the 2002 Annual Report already began to express concern over how “lack of state and federal funding [had] impeded progress on” several areas like the water management and finance plan. For a program intended to average over \$1 billion in spending per year, the CALFED was barely meeting half of that standard when only \$504 million was secured in funding for the next year, 2003.<sup>64</sup>

**2003.** Another important group was created in 2003: The Bay-Delta Authority. While the Bay-Delta Public Advisory Committee served primarily to advise the project and consult the public, the Bay-Delta Authority was delegated the task of long-term planning, especially in finance, and oversight. The Authority was also charged to report

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<sup>63</sup> "Annual Report 2001," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/library/Part1-AnnualRpt\\_2001.pdf](http://calwater.ca.gov/content/Documents/library/Part1-AnnualRpt_2001.pdf) (accessed April 19, 2012), 12-13.

Note: One citation for the annual report will be given at the end of each year's summary, instead of per cited sentence.

<sup>64</sup> "Annual Report 2002," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/AnnualReport\\_2002.pdf](http://calwater.ca.gov/content/Documents/AnnualReport_2002.pdf) (accessed April 19, 2012), 28-31.

the status of implementation on all areas of the CALFED plan. Progress appeared to have slowed because the 2003 report summarized the improvements made over the past three years, instead of just the current year like the past reports did. The report admitted that “securing reliable state and federal funding continues to be the greatest challenge for the Program” and “lack of federal authorization has adversely affected implementation of projects in the Water Use Efficiency, Conveyance, and Levee System Integrity Programs”. Many of these same areas were way behind schedule “compared to levels projected in the Record of Decision”.<sup>65</sup>

**2004.** Despite severe funding issues between 2001 and 2003, 2004 showed some promise. Funding from Proposition 50, a California state bond, was made available to support all program objectives, instead of a selected few. President George W. Bush also passed legislation that authorized federal agencies to implement CALFED activities and allocated \$389 million to the program over the next six years. This amount was unfortunately still nowhere near enough for CALFED to meet its original goals, but it was a significant improvement from the previous years when the program received little to no federal funding. By this point, \$2.9 billion had been committed to CALFED, which contributed to significant strides in levee improvements, watershed projects, and several other project objectives. However, most other parts of the plan had been underfunded, which suggested the entire plan and its goals would soon need reexamination.<sup>66</sup>

**2005.** Instead of optimistically beginning its summary of progress like past reports, “this year’s Progress Report differ[ed] slightly from previous years in that it

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<sup>65</sup> "Annual Report 2003," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/AnnualReport\\_2003.pdf](http://calwater.ca.gov/content/Documents/AnnualReport_2003.pdf) (accessed April 19, 2012), 48-52.

<sup>66</sup> "Annual Report 2004," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/Annual\\_Report\\_2004.pdf](http://calwater.ca.gov/content/Documents/Annual_Report_2004.pdf) (accessed April 19, 2012), 3-9.

recognize[d] that many of the schedules established in the ROD (Record of Decision) [had] been substantially delayed.” The report moves on to acknowledge how its schedules and goals “were unreasonable at the outset.” Ridden with previously unforeseen problems of inadequate funding and other hurdles, the CALFED Bay-Delta Plan had “not realized the progress or desired outcomes expected in each of the four CALFED Program objects: levee system integrity, ecosystem restoration, water quality and water supply reliability.” Despite the program accomplishing several restoration projects and beginning improvements for many areas of the plan, it was time for CALFED to become more realistic and less idealistic. The plan could no longer be the amazing please-all solution it once promised to be; leaders involved with CALFED soon had “to make difficult choices, likely disappointing some constituencies without pleasing others” by refocusing the program into Governor Schwarzenegger’s proposed 10-Year Action Plan, which was a water financing plan to push CALFED and other water programs forward.<sup>67</sup> This new 10-Year Action Plan proposed a huge change in the governance structure of CALFED, new financing plans for new priorities, creation of a focused Delta Vision, and the start of an important new habitat conservation plan.<sup>68</sup>

**2006:** The 2006 Annual Report displays a shift in tone following the refocused 10-Year Plan from 2005. Despite slow, continuous progress in some areas of the CALFED Plan, the Bay-Delta Authority and Public Advisory Committee acknowledged the urgency for revisions of the previous CALFED goals and implementation plans from

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<sup>67</sup> "Annual Report 2005," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/Annual\\_Report\\_2005.pdf](http://calwater.ca.gov/content/Documents/Annual_Report_2005.pdf) (accessed April 19, 2012), 10-11.

<sup>68</sup> "CALFED Bay-Delta Program: 10-Year Action Plan Highlights," CALFED Bay-Delta Program Archived Website, [http://www.calwater.ca.gov/content/Documents/10\\_Year\\_Action\\_Plan\\_Highlights.pdf](http://www.calwater.ca.gov/content/Documents/10_Year_Action_Plan_Highlights.pdf) (accessed April 19, 2012), 10, 15.

the Record of Decision. In the conclusion of the report, these authorities published an ultimatum that would have to be met by the end of 2007, the end of the seven-year Stage 1 phase of CALFED. This ultimatum stated that “performance measures must be developed and implemented for the four CALFED Program Objectives”, “a more detailed evaluation and analysis of CALFED Program progress in relation to the CALFED ROD must be prepared”, “and a revised CALFED implementation schedule must be prepared.” If these measures failed to be taken, the CALFED Program would be “out of balance by the end of 2007.”<sup>69</sup>

**2007 – The Final Report:** The final CALFED report released was primarily a retrospective look at lessons learned from the seven years in Stage 1, a summary of total progress, and a preface to California’s two new priorities—the Delta Vision and the Bay-Delta Conservation Plan. In the section for thoughts moving forward, the report inferred the death of the CALFED Bay-Delta Program by explaining how the demanded reevaluation of CALFED in 2007 “allowed for the possibility for changes in programs and projects that would best enable the agencies to meet the still-valid CALFED goals”. Total spending of approximately \$4.2 billion reported for seven years of Stage 1 and the initial approximately \$500 million of federal funding for CALFED planning amount to a grand total of \$4.7 billion spent on the CALFED Bay-Delta Plan.<sup>70</sup>

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<sup>69</sup> "Annual Report 2006," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/CALFED\\_Annual\\_Report\\_2006.pdf](http://calwater.ca.gov/content/Documents/CALFED_Annual_Report_2006.pdf) (accessed April 19, 2012). 1-3, 47.

<sup>70</sup> "Annual Report 2007," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/Annual\\_Report\\_2007.pdf](http://calwater.ca.gov/content/Documents/Annual_Report_2007.pdf) (accessed April 19, 2012), 28-30, 52-53.

### ***Lessons Learned from CALFED – Delta Stewardship Council Tries Again***

*“In general, the CALFED Program has worked well toward meeting its objectives during the first seven years, particularly in areas outside the Delta...Progress within the Delta has been limited.”<sup>71</sup>*

Lack of progress in the Bay-Delta was the biggest failure of the misleadingly-titled CALFED Bay-Delta Program. Progress outside of the Delta is still important, but the Delta is the center for creating any real improvements to water reliability, ecosystem restoration, and water quality. Thus, the progress made through CALFED was overvalued in this statement because the central problem remained unsolved. A number of mistakes and a lack of action in implementation led to this disappointment that must be learned from and avoided moving forward.

First of all, the size and complexity of the project goals and governing entities were too much to handle all at one time. With twelve widespread, yet inter-related project objectives, the lagging of one project often held back another. As certain projects fell behind and funding could not be secured, CALFED established one authority after the other to create accountability and oversight over the projects. Although the Bay-Delta Authority and Public Advisory Committee were huge assets for comprehensive reporting and public accountability, the inclusion of so many interests groups on each council made collaboration lengthy and difficult. Envision thirty people broken into groups to keep track of twelve projects, each with several sub-projects, and then convening to discuss them all together. The breadth of CALFED was simply too much to wield.<sup>72</sup> The focus on

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<sup>71</sup> Ibid, 5-6.

<sup>72</sup> I used the following source to support my argument of how over-collaboration in CALFED contributed to its failure. This journal article uses CALFED as an example to prove that intentions for collaboration and adaptive management are important, but there are limitations to both that must be considered.

these big, long-term projects also led to a lack of short-term solutions. When agriculture needed increased water exports and environmentalists saw the declining Delta, CALFED could not deliver because it was continuously waiting on funding for large-scale improvement. Those stakeholders could not wait any longer. Some went “outside the CALFED process to seek delivery increases”, while environmentalists turned, “in desperation, to the courts” with their lawsuits.<sup>73</sup>

The CALFED plan’s initial lack of foresight was another mistake that resulted from the size and complexity problem. The program had so much momentum after the signing of the Bay-Delta Accord that the planners had to quickly retreat and write between hundreds and thousands of pages, explaining the plan and its environmental impacts. However, there was no flexibility in the plan, only pure dates and rigid figures of expected funding. When the funding goals could not be met, beginning in the first year, the annual reports could only report delays and how the plan hoped for sufficient funding the next year. When the Delta suffered pelagic organism decline (POD), the plan did not have alternative restoration ideas and had to delayed projects further.<sup>74</sup> These problems led to a lack of confidence in the program, which explains the minimal federal funding received during Stage 1. A lack of funding then led to a shortage in personnel and financial leverage for contracting projects.<sup>75</sup> CALFED lacked support and a true authority to push it forward, until Governor Schwarzenegger re-focused CALFED. That

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Kallis, Giorgos, Michael Kiparsky, and Richard Norgaard, "Collaborative governance and adaptive management: Lessons from California's CALFED Water Program," (*Environmental Science & Policy* 12, no. 6, 2009), 631-643.

<sup>73</sup> Owen, Dave, "Legal constraints, environmental variability, and the limits of innovative environmental governance," (*Environmental Science & Policy* 12, no. 6, 2009), 685.

<sup>74</sup> "Annual Report 2005," CALFED Bay-Delta Program Archived Website, [http://calwater.ca.gov/content/Documents/Annual\\_Report\\_2005.pdf](http://calwater.ca.gov/content/Documents/Annual_Report_2005.pdf) (accessed April 19, 2012), 10.

<sup>75</sup> Ibid.

revitalization lead to the death of CALFED, but most importantly to the birth of new ideas—the creation of a new plan and vision for the Delta by the Delta Vision Blue Ribbon Task Force and an improved habitat restoration plan.<sup>76</sup>

In 2009, the task force established the Delta Stewardship Council, a small seven-member group to succeed the CALFED Bay-Delta Authority and Program.<sup>77</sup> This new council vows to learn from the mistakes of CALFED and put forth the Delta Plan, a comprehensive management plan to become law when finished. Already, the size and complexity of governance is smaller and simpler; the page count of the released fifth draft of the plan is a fraction of the page count of the initial CALFED documents; and the council released an interim plan to perform early actions while the plan is being finalized.<sup>78,79</sup> Within the plan is a section requiring conservation and restoration provisions, which the Bay-Delta Conservation Plan (BDCP) now serves as after an amendment was made to the fifth draft in August 2011 to include the BDCP.<sup>80</sup> The next chapter will examine the BDCP as a current proposal for addressing water reliability, ecosystem restoration, and water quality in the Delta.

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<sup>76</sup> Kallis et al, 634.

<sup>77</sup> "FAQ: 12. How does the Delta Stewardship Council differ from previous efforts – such as CALFED – to manage the Delta?," Delta Stewardship Council, <http://deltacouncil.ca.gov/faq/12-how-does-delta-stewardship-council-differ-previous-efforts-%E2%80%93-such-calfed-%E2%80%93-manage-delta> (accessed April 20, 2012).

<sup>78</sup> Ibid.

<sup>79</sup> "Interim Plan - Events and Documents | Delta Stewardship Council," Delta Stewardship Council, <http://deltacouncil.ca.gov/interim-plan> (accessed April 20, 2012).

<sup>80</sup> Grindstaff, Joseph. "Sacramento-San Joaquin Delta Plan Report," Delta Stewardship Council, <http://deltacouncil.ca.gov/sites/default/files/documents/files/Sacramento-San%20Joaquin%20Delta%20Plan%20Report1.pdf> (accessed April 20, 2012), 5.

### **Chapter 3: The Bay-Delta Conservation Plan**

In 2006, the California Natural Resources Agency (NRA) convened several stakeholders, mainly public water agencies and environmental organizations, to develop the comprehensive habitat conservation plan that the 10-Year Action Plan called for; this plan soon became known as the Bay-Delta Conservation Plan (BDCP). This group of stakeholders formed the BDCP Steering Committee and signed a formal Planning Agreement in December 2006, committing to the planning and drafting of the BDCP.<sup>1</sup> The primary goals of the BDCP “are to advance the restoration of the ecological functions and productivity in the Delta” by meeting the requirements of laws, such as the Endangered Species Act (ESA) and California’s Natural Community Conservation Planning Act (NCCPA); and to “restore and protect water supplies provided by the SWP and CVP.”<sup>2</sup> By 2010, a full draft of the plan was ready for evaluation and approval by the necessary resource agencies. The Steering Committee continued to refine the plan by seeking public participation, so that the California Department of Water Resources could be advised when taking on its responsibility of finalizing the plan.<sup>3</sup> Since the first draft was introduced in 2010, there has been continuous revision to the BDCP. The committee released the most current revisions to many sections of the draft on February 29, 2012

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<sup>1</sup> State of California, "BDCP Chapter 1 – Introduction," Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_1\\_-\\_Introduction\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_1_-_Introduction_2-29-12.sflb.ashx) (accessed March 21, 2012).

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.



and then released the remaining sections of the Effects Analysis on April 13, 2012.<sup>4</sup> The following sections will first provide a summary of the Plan's goals, objectives, implementation methods, funding expectations, and potential impacts; and then present current opposition and support for the plan.

### ***Goals and Objectives the BDCP Hopes To Achieve***

Aside from giving the background of the BDCP's development, the first chapter of the Plan briefly states the planned goals, project objectives, and scope of the BDCP. The original planning agreement was signed on the basis of nine preliminary conservation objectives:

*1) provide protection for covered species under the Plan and their natural communities and ecosystems; 2) preserve the diversity of native fish, wildlife, plant, and natural communities in the covered area; 3) preserve and restore declining habitats and recover declining species; 4) reduce the need to list additional species as threatened or endangered; 5) create species-specific goals and objectives; 6) set habitat-specific goals and objectives; 7) implement an adaptive management and monitoring program to effectively respond to changing Delta conditions; 8) minimize and mitigate the taking of listed species in the BDCP; 9) avoid any actions that may jeopardize the continued existence of covered species or destroy critical habitat.*<sup>5</sup>

General planning goals stemmed from these objectives during the development process.

There are eight planning goals of the BDCP:

*1) protect and conserve covered species in the Plan Area; 2) preserve, restore, and enhance the natural habitats and ecosystems of these species; 3) allow projects that positively impact water supply, water quality, and ecosystem restoration to continue under a better regulatory system; 4) implement a means of doing the above activities in a manner that complies with all relevant state and federal environmental laws; 5) rightfully apply for permits to take these covered species for conservation implementation; 6) coordinate a standardized way of*

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<sup>4</sup> "BDCP Plan Documents," The Bay-Delta Conservation Plan, <http://baydeltaconservationplan.com/Library/DocumentsLandingPage/BDCPPlanDocuments.aspx> (accessed April 21, 2012).

<sup>5</sup> Ibid.

*mitigating and compensating for activities under the BDCP; 7) implement a less costly and more efficient project review process than the typical project-by-project, species-by-species evaluation; 8) provide a well-supported plan that lays out clear expectations and processes of meeting regulations.*<sup>6</sup>

The scope or “Plan Area” of the BDCP contains the entire Sacramento-San Joaquin Delta and areas around the Delta in need of conservation measures such as the Suisun Marsh, Suisun Bay, and the upper Yolo Bypass.<sup>7</sup> In addition, areas covered by the BDCP will include any and all habitat lands that are conserved through implementation. Thus, the scope of the Plan will be flexible and expanded as needed when implementation begins.

### ***BDCP Conservation Strategy and Measures Within It***

In order to meet the stated objectives and goals above, the BDCP proposes a comprehensive set of measures for restoring the Delta ecosystem, managing species and habitats listed in the Plan, improving water supply reliability, and implementing systems for mitigation and monitoring of BDCP activities to avoid detrimental effects on the Delta.<sup>8</sup> The first part of BDCP’s strategy is to implement measures that meet the plan’s biological goals of improving the hydrological conditions of the Delta and the ecological conditions. The second part of BDCP’s strategy is to meet its water supply goals of improving supply and reliability of water diverted from the Delta by the SWP and CVP. There are three types of conservation measures that the BDCP presents for implementing

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<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> "BDCP Chapter 3.1 and 3.2 - Conservation Strategy 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_3\\_1\\_and\\_3\\_2\\_-\\_Conservation\\_Strategy\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_3_1_and_3_2_-_Conservation_Strategy_2-29-12.sflb.ashx) (accessed April 21, 2012).

these strategies: conveyance and water operations, habitat protection and restoration, and other stressors.<sup>9</sup>

The conveyance and water operations conservation measures propose to construct new north Delta diversions with added fish screens, to construct a “tunnel/pipeline isolated conveyance facility” or better known as a peripheral canal (See Appendix A), and to improve conveyance operations of facilities north, south, and through the Delta in the near and long term.<sup>10</sup> The canal that the BDCP proposes is determined to be the best alternative to six other conveyance systems that the Plan evaluates in Chapter 9.<sup>11</sup> In order to maintain water supply, but also preserve fish habitats, the BDCP also proposes to enhance the Yolo Bypass Fisheries by constructing gates on the Fremont Weir that will increase floodplain inundation, improve passage and habitat conditions for specific species like the Chinook salmon and steelhead, and manage the flow of the bypass.<sup>12</sup>

Habitat protection and restoration conservation measures consist of several specific restoration projects, such as the Tidal Habitat Restoration measure, Riparian Habitat Restoration, and the Creation of the Preserve System. The Tidal Habitat Restoration proposes to restore “65,000 acres of freshwater and brackish tidal habitat.”<sup>13</sup> Riparian Habitat Restoration aims to restore “5,000 acres of riparian forest and scrub

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<sup>9</sup> "Issues for Discussion for the Bay-Delta Conservation Plan Draft," California Natural Resources Agency, [http://resources.ca.gov/docs/Issues\\_for\\_Discussion\\_BDCP\\_9-9-10.pdf](http://resources.ca.gov/docs/Issues_for_Discussion_BDCP_9-9-10.pdf) (accessed April 21, 2012), 6.

<sup>10</sup> Ibid, 6-8.

<sup>11</sup> "BDCP Chapter 9 - Alternatives to Take 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_9\\_-\\_Alternatives\\_to\\_Take\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_9_-_Alternatives_to_Take_2-29-12.sflb.ashx) (accessed April 21, 2012).

<sup>12</sup> "BDCP Chapter 3.4 and 3.5 - Conservation Strategy - Conservation Measures and Important Regional Actions 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_3\\_4\\_and\\_3\\_5\\_-\\_Conservation\\_Strategy\\_-\\_Conservation\\_Measures\\_and\\_Important\\_Regional\\_Actions\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_3_4_and_3_5_-_Conservation_Strategy_-_Conservation_Measures_and_Important_Regional_Actions_2-29-12.sflb.ashx) (accessed April 21, 2012).

<sup>13</sup> "Issues for Discussion for the Bay-Delta Conservation Plan – Draft," California Natural Resources Agency, [http://resources.ca.gov/docs/Issues\\_for\\_Discussion\\_BDCP\\_9-9-10.pdf](http://resources.ca.gov/docs/Issues_for_Discussion_BDCP_9-9-10.pdf) (accessed April 21, 2012), 8.

within the [other] new floodplain, tidal, and channel margin restorations.”<sup>14</sup> The Preserve System would protect 8,000 acres of grassland, 300 acres of vernal pool complex, and 400 acres of alkali in existing natural habitats. It would also “protect and maintain wildlife habitat functions of 4,600 acres of rice lands and 12,020 to 28,040 acres of non-rice agricultural lands.”<sup>15</sup> There are a number of measures not listed here, but the overall goal is to have specific action plans for restoration as part of a larger vision of restoring 80,000 acres of habitat over a 50 year period (See Appendix B).

The BDCP acknowledges that there are many other stressors on the Delta that affect its ecosystem health, the fish, and wildlife. Other Stressors Conservation Measures single out the stressors and proposes several solutions to protect habitats and species. For example, Methylmercury Management would ensure the management of mercury and methylmercury levels in restoration areas.<sup>16</sup> Predator Control would reduce predators of covered species by “conducting focused predator control in high predator density locations.”<sup>17</sup> Conservation Hatcheries proposes new programs and the expansion of existing programs that promote the conservation for the delta and longfin smelt.<sup>18</sup>

In addition to these three conservation measures, the BDCP has real-time, near-term, and long-term operational criteria to ensure past mistakes from CALFED are not repeated. The short-term criteria are specific restrictions for exports during certain times of the year, just as the Bay-Delta Accord previously proposed. Through real-time monitoring by relevant agencies, the BDCP will ensure the reduced impact on water

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<sup>14</sup> Ibid.

<sup>15</sup> Ibid, 9.

<sup>16</sup> Ibid, 12.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

supply under practices of adaptive management.<sup>19</sup> In the long term, new “operational criteria will be implemented once the new conveyance system on the Sacramento River becomes operational.”<sup>20</sup>

### ***Implementation and Funding of the BDCP***

The BDCP has three chapters on implementation; the first presents the schedule of implementation; the second presents the structure of implementation; and the third presents anticipated costs and expected funding sources.<sup>21</sup> Implementation of the BDCP is proposed to be done over the 50 years the plan has take authorization permits, while many of the conservation measures will be implemented under an adaptive management system as soon as possible “following planning, design, and regulatory compliance”.<sup>22</sup> Chapter 6 of the BDCP details the anticipated timing of every proposed measure and promises annual progress reports, water operations reports, and concrete budgets.<sup>23</sup> In addition, the BDCP must be comprehensively reviewed and must prepare an implementation plan every five years, so that the plan not only aims for long-term goals, but also looks in detailed hindsight and foresight at short-term accomplishments and upcoming short-term implementation goals.<sup>24</sup> Lastly, the schedule anticipates unforeseen

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<sup>19</sup> Ibid, 16-18.

<sup>20</sup> Ibid, 21.

<sup>21</sup> "BDCP Plan Documents," The Bay-Delta Conservation Plan, <http://baydeltaconservationplan.com/Library/DocumentsLandingPage/BDCPPlanDocuments.aspx> (accessed April 21, 2012).

<sup>22</sup> "Issues for Discussion for the Bay-Delta Conservation Plan – Draft," California Natural Resources Agency, [http://resources.ca.gov/docs/Issues\\_for\\_Discussion\\_BDCP\\_9-9-10.pdf](http://resources.ca.gov/docs/Issues_for_Discussion_BDCP_9-9-10.pdf) (accessed April 21, 2012), 31.

<sup>23</sup> "BDCP Chapter 6 - Plan Implementation 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_6\\_-\\_Plan\\_Implementation\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_6_-_Plan_Implementation_2-29-12.sflb.ashx) (accessed April 21, 2012).

<sup>24</sup> Ibid.

circumstances and has mitigation measures for altering implementation of the BDCP, while trying to maintain the original terms of the plan.<sup>25</sup>

Chapter 7 of the BDCP clearly lays out the implementation structure of the plan. Beginning with the establishment of the BDCP Implementation Office, the BDCP gives the office the responsibilities of overseeing non-water operations and ensuring regulatory compliance of all plan activities.<sup>26</sup> The rest of the chapter details what and how many managing personnel will be hired, the exact structure of groups within the implementation structure, and the BDCP's relationship to regulatory agencies and the Delta Stewardship Council (See Appendix C).<sup>27</sup>

The securing of funding and the elaboration of exact costs are most crucial to actual implementation of the BDCP. In 2010, the BDCP estimated that the total implementation costs of the plan over 50 years would range between a low estimate of \$20.9 billion dollars and a high estimate of \$24.7 billion dollars (2009 dollars).<sup>28</sup> This figure excludes financing costs of the project, which could significantly increase this estimate range (See Appendix D). The most substantial cost is the conveyance plan of a peripheral canal. In the previous draft release of implementation costs on February 29, 2012, the average estimate cost of the canal's capital and operation costs increased from \$14.7 billion in the 2010 estimate to \$15.7 billion.<sup>29</sup> The average cost has increased primarily because the new high cost estimate is much higher than previously expected. It

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<sup>25</sup> Ibid.

<sup>26</sup> "Chapter 7 - Implementation Structure," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/Chapter\\_7\\_-\\_Implementation\\_Structure.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Chapter_7_-_Implementation_Structure.sflb.ashx) (accessed April 21, 2012).

<sup>27</sup> Ibid.

<sup>28</sup> "Issues for Discussion for the Bay-Delta Conservation Plan – Draft," California Natural Resources Agency, [http://resources.ca.gov/docs/Issues\\_for\\_Discussion\\_BDCP\\_9-9-10.pdf](http://resources.ca.gov/docs/Issues_for_Discussion_BDCP_9-9-10.pdf) (accessed April 21, 2012), 40.

<sup>29</sup> I found the average cost between the low and high estimates for the two years (2010 and 2012)

is unknown whether this is due to conservatism in estimating, or if high-estimate components of the canal have truly increased. Either way, the canal is the most expensive project of the BDCP and must have secured funding sources before implementation. Multiple funding sources are expected to finance the BDCP, but many contracts are still under discussion. Chapter 8 of the BDCP details the distribution funding sources of the estimated \$23.6 billion dollars needed (See Appendix F). 73% is expected to come from State and Federal Water Contractors, all of whom have “committed to fully fund all construction and related mitigation costs for implementation” of the conveyance projects.<sup>30</sup> The remaining 27% is expected to come from state and federal government funding, much of which is still in negotiation or not secured. Approximately 11% of BDCP funding is hoping to come from the New Water Bond initiative that will be on the November 2012 ballot, but the approval of that is uncertain.<sup>31</sup>

### ***Anticipated Impacts of the BDCP***

The Effects Analysis portion of the BDCP was the last to be released and is currently under a two-phase independent scientific review. During Phase I in 2011, the Independent Science Review Panel (panel) evaluated the first set of draft appendices from the Effects Analysis: Conceptual Foundation and Analytical Framework of the effects analysis; and the Entrainment Appendix.<sup>32</sup> The panel provided a series of recommendations for the BDCP to move forward with when preparing the actual Effects

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<sup>30</sup> "BDCP Chapter 8 - Implementation Costs and Funding Sources 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_8\\_-\\_Implementation\\_Costs\\_and\\_Funding\\_Sources\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_8_-_Implementation_Costs_and_Funding_Sources_2-29-12.sflb.ashx) (accessed April 21, 2012).

<sup>31</sup> Ibid.

<sup>32</sup> "Independent Review of the Draft Bay Delta Conservation Plan Effects Analysis," Delta Stewardship Council, <http://deltacouncil.ca.gov/science-program/independent-review-draft-bay-delta-conservation-plan-effects-analysis> (accessed April 21, 2012).

Analysis section. The panel felt that the goals of the Effects of Analysis had not been clearly defined or well-organized within the Framework.<sup>33</sup> One of the most important recommendations the panel made was that “analyses of the individual actions need to be scaled to an integrative analysis that includes all relevant conservation measures of the 19 possible [now 22].”<sup>34</sup> The preparers of the Effects Analyses took these recommendations very seriously and finally released a draft in February 2012, which is now being evaluated through Phase II. The independent review should be released in June 2012.<sup>35</sup> The draft accomplished individual action analysis on individual species and habitats as recommended by the Panel. The Effects Analysis draft is also well-organized, despite its length.

In summary of the released Effects Analysis findings, net effects on specific species and habitats range from negative to positive. For nearly every species and habitat, there are both beneficial and adverse effects resulting from the BDCP. Using covered bird species as a brief example from Chapter 5, Section 5.1 (See Appendix G): several conservation measures produce an even net effect of both beneficial and adverse effects on bird species.<sup>36</sup> However, the CM1 Water Facilities and Operation, or the conveyance canal project, produces only negative effects on the covered bird species; whereas CM22 Avoidance and Minimization Measures produce only beneficial effects to these bird

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<sup>33</sup> "Bay Delta Conservation Plan (BDCP) Effects Analysis Conceptual Foundation and Analytical Framework and Entrainment Appendix," Delta Stewardship Council, [http://deltacouncil.ca.gov/sites/default/files/documents/files/BDCP\\_Effects\\_Analysis\\_Review\\_Panel\\_Report\\_FINAL.pdf](http://deltacouncil.ca.gov/sites/default/files/documents/files/BDCP_Effects_Analysis_Review_Panel_Report_FINAL.pdf) (accessed April 21, 2012), 4-5.

<sup>34</sup> Ibid, 4-5.

<sup>35</sup> Independent Review of the Draft Bay Delta Conservation Plan Effects Analysis," Delta Stewardship Council, <http://deltacouncil.ca.gov/science-program/independent-review-draft-bay-delta-conservation-plan-effects-analysis> (accessed April 21, 2012).

<sup>36</sup> "BDCP Chapter 5 - Effects Analysis 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_5\\_-\\_Effects\\_Analysis\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_5_-_Effects_Analysis_2-29-12.sflb.ashx) (accessed April 21, 2012).



species; these trends are true for all other tables for other species in the rest of the Effects Analyses.<sup>37</sup>

Given these potential impacts, especially from the peripheral canal, a lot of public attention has been given to the BDCP in the recent year. Reactions to the plan are mixed, with heavy support for the conservation and water reliability ideals of BDCP and great opposition towards the peripheral canal.

### ***Criticism and Support for the BDCP***

Critics of the BDCP are mostly perturbed by the re-emergence of the peripheral canal project and the environmental risks associated with the construction of it. Tina Swanson, Director of the Natural Resources Defense Council (NRDC) Science Center in San Francisco, published a post on the BDCP on April 17, 2012, just after the April 13<sup>th</sup> release of the Effects Analyses. She notes that “according to its own ‘effects analysis,’ [the plan] would make the existing situation worse by further degrading estuarine habitat, harming most of the fish species it is supposed to help and increasing water diversions from this already over-tapped system.”<sup>38</sup> The Environmental Water Caucus (EWC) echoed the same concern just a day before on April 16, when it mailed a letter to the California Natural Resources Agency. After beginning review of the Effects Analysis, the EWC found a number of the findings in the analysis alarming and proceeded to list ten observed problems with the BDCP.<sup>39</sup> The most notable points highlight the BDCP’s:

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<sup>37</sup> Ibid.

<sup>38</sup> Swanson, Tina, "California's Bay Delta Conservation Plan Has No Clothes," Switchboard, from NRDC, [http://switchboard.nrdc.org/blogs/tswanson/californias\\_bay\\_delta\\_conserva.html](http://switchboard.nrdc.org/blogs/tswanson/californias_bay_delta_conserva.html) (accessed April 21, 2012).

<sup>39</sup> "Environmental Water Caucus Letter Regarding the Bay Delta Conservation Plan," Environmental Water Caucus of California, <http://www.ewccalifornia.org/reports/meralbdcpcconcernsv4.pdf> (accessed April 21, 2012).

*(1) “lack of specific, measurable, and achievable objectives that define the BDCP contribution to the recovery of covered species and the conservation of natural communities in the Delta. There are currently no goals to recover populations of endangered fish in the Delta, only for avoiding jeopardy”; (2) “failure to align with the state’s objective in reducing reliance on the Delta”; (3) “absence of a full range of alternatives, including an alternative which would reduce exports from the Delta.”*<sup>40</sup>

Another point notes that the board members overseeing implementation of the BDCP are primarily water export contractors, who have good reason to ignore the reduced water exports alternative.<sup>41</sup> These are the same water contractors funding 73% of the BDCP.

In a balanced “head to head” editorial on the Sacramento Bee, Pia Lopez and Ben Boychuk answer the important question: “Should California build a Delta water canal it rejected in the 1980s?”<sup>42</sup> Pia Lopez answered ‘No’, just as environmentalists like Tina Swanson and groups within the EWC would answer. She begins by encouraging everyone to “not obscure what this is all about. California’s post-World War II plumbing system” serves to export “Northern California water to dry Southern California cities and farms” through the State Water Project and the Central Valley Project.<sup>43</sup> She sees this canal as a way to please Southern California and “San Joaquin Valley’s arid west side.”<sup>44</sup> Southern California would not propose spending billions of dollars on a project just to maintain current levels of water exports; “they want to maximize water exports south of the Delta. More water, not just ‘reliable’ water.”<sup>45</sup> The solution should not be about constructing another water project that forces water to flow backwards. California “ought

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<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

<sup>42</sup> Boychuk, Ben, and Pia Lopez, "Head to Head: Should California build a Delta water canal it rejected in the 1980s?", The Sacramento Bee, <http://www.sacbee.com/2012/01/18/4195410/should-california-build-a-delta.html> (accessed April 21, 2012).

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

to be talking seriously about how to reduce Southern California dependence on Delta water” through better efforts of conservation and water recycling. Pia Lopez ends by noting that Southern California “may never get to ‘Delta-free self-reliance’” because of the large population, but better measures can be taken than more diversions from the North to the South.<sup>46</sup> Ben Boychuk disagrees and makes his case from Pia Lopez’s ending point about never-ending reliance on the Delta.

Despite agreeing with Lopez on how the peripheral canal “is a rat’s nest of politics and special interests” and the ecological and economic uncertainty of it, Ben Boychuk still thinks California “should build it anyway.”<sup>47</sup> Southern California requires “80 percent of all water consumed statewide”, but Boychuk does not expect conservation to ease the demand. Based on a 2009 mandated “20 percent cut in consumption”, but the improvement in water supply was minimal because “farmers use 80 percent of all water consumed statewide”.<sup>48</sup> Despite environmentalists desire “to thwart the peripheral canal”, Boychuk argues that the southern cities “need water to live” and unfortunately “you can’t drink good intentions” of protecting the environment.<sup>49</sup> Essentially, Boychuk sees how the special interest and favor for a peripheral canal skews priorities of restoration, but he realistically admits this is the best option for now because the south needs water. Southern California will undoubtedly support the BDCP and demand water “as long as California remains one state.”<sup>50</sup>

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<sup>46</sup> Ibid.

<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

Supporters of the BDCP have the same realistic views on water demand in California as Boychuk. The Public Policy Institute of California (PPIC) recently released a report entitled “California 2025: Planning for a Better Future” and addresses the state of water in California in a section of the report. The first statement the report makes on water is how “instability in the Delta” is “California’s biggest water challenge.”<sup>51</sup> The report argues that “a peripheral canal is the best approach for addressing both ecosystem and economic risks” because it is better than the current system of pumping and produces better water quality and water supply reliability.<sup>52</sup> A dual system of a canal and continued pumping is feasible in the short-term, but pumping must be eliminated in the long term because of levee failures and sea level rise that increase salinity in the Delta.<sup>53</sup> In 2008 University of the Pacific Business Forecasting report, a peripheral canal is compared to the often ignored alternative of ending Delta water exports. The report concludes that ending exports would be too costly, due to the increased need for conservation systems, water recycling, and desalination, which are much more expensive sources of water.<sup>54</sup>

U.S. Leaders also support the BDCP. Governor Jerry Brown advocated for the Plan to begin implementation by the end of 2012 in his State of the State address, 22 years after he signed a previous peripheral canal project into law.<sup>55</sup> President Obama and

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<sup>51</sup> "California 2025: Planning for a Better Future," Public Policy Institute of California, [http://www.ppic.org/content/pubs/report/R\\_212BKR.pdf](http://www.ppic.org/content/pubs/report/R_212BKR.pdf) (accessed April 21, 2012).

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Michael, Jeffrey A., "The Economics of Ending Delta Water Exports Versus the Peripheral Canal: Checking the Data of the PPIC," University of the Pacific - Business Forecasting Center, <http://forecast.pacific.edu/articles/peripheral%20canal%20PPIC%20review.pdf> (accessed April 21, 2012).

<sup>55</sup> "State of the State Address Calls for Action on Water," Association of California Water Agencies, <http://www.acwa.com/news/water-news/state-state-address-calls-action-water-delta-fix-2012> (accessed April 21, 2012).

the Department of Interior have also supported the BDCP since December 2010.<sup>56</sup> These leaders support the BDCP for the same reasons the PPIC listed, but also support it from a place of political and legislative experience. The BDCP is a huge improvement from CALFED, as intended, to change the status quo of Delta exports. There are ecological risks associated with keeping both the current pumping system and shifting to a peripheral canal, but the canal is the one system that California has not tried, despite the previous two times it nearly became an authorized project.

### ***Analytical Conclusions about the BDCP***

While the BDCP is clearly a better approach to resolving the Delta problems than CALFED was, it is still far from being the balanced solution the declining Delta needs. The argument that the construction of a peripheral canal would be better than the pumping system currently place is valid. To some extent, some action would be better than no action. However, the most disappointing part of the BDCP is its name; if this is conservation plan, why do the project's costs and needs not reflect that? The peripheral canal makes up more than a majority of the project's costs. Despite the proposed export restrictions in the BDCP, there are times of the year that more water would be allowed to be exported than current exporting standards. This explains why environmentalists are waving their arms in panic; this plan does not appear to be conserving any water. While it is impossible to measure total potential net effects of the plan on the Delta, the potential increased exports to a growing Southern California is likely to even out the amount of

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<sup>56</sup> "Obama Administration Announces Support for Essential Elements of the California Bay-Delta Conservation Plan," U.S. Department of the Interior, <http://www.doi.gov/news/pressreleases/Obama-Administration-Announces-Support-for-Essential-Elements-of-the-California-Bay-Delta-Conservation-Plan.cfm> (accessed April 21, 2012).

habitat the Plan proposes to restore and protect. The EWC may only represent one group of stakeholders, but its letter to the California Natural Resources Agency raised very valid concerns over the Plan. First of all, the lack of real standards for restoration was disappointing. Despite its valuable acreage goals for restoration, those efforts would be futile if the population of certain species still decline. The BDCP needs to adopt better standards of conservation if it has any hopes of truly elongating the life of the Bay-Delta, while maintaining long-term water supply for all of California. Next, reducing water exports is an alternative that should have been worthy of the BDCP's evaluation in Chapter 9, its assessment of conservation methods to "reduce the amount of 'take' or increase the level of conservation of listed species."<sup>57</sup> Even if the costs would be very high, the neutrality of the Plan comes into question because reducing water exports was not even addressed, giving environmentalists more reason to oppose the plan.

Overall, the BDCP needs more revision of its content in order to be a viable solution for the Delta. As it stands, the actual conservation efforts do not seem enough to assure California that the Delta's ecosystem is safe from continuing decline. The peripheral canal is a promising alternative to current pumping systems, but may not be feasible in the long-term given Southern California's growth. Perhaps the canal should be planned for a shorter-term and efforts that can even slightly wean Southern California off of Delta water should be doubled. The main concern is that the BDCP needs to demonstrate a more balanced approach, in line with its planned goals and objectives, so

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<sup>57</sup> "BDCP Plan Documents," The Bay-Delta Conservation Plan, <http://baydeltaconservationplan.com/Library/DocumentsLandingPage/BDCPPlanDocuments.aspx> (accessed April 21, 2012).

that more people will support the plan. However, with continuing warfare over water in California, this surely will prove to be the BDCP's hardest task.

#### **Chapter 4: H.R. 1837 – The Sacramento-San Joaquin Valley Water Reliability Act**

After a devastating drought in California between 2007 and 2009, three Congressman serving districts in the Central Valley—Rep. Devin Nunes (CA-21), Rep. Kevin McCarthy (CA-22), and Rep. Jeff Denham (CA-19)—came together to draft a bill that would no longer allow their counties to receive less-than-promised water deliveries. The likely suspects that caused water allocations to reach as low as 10% in parts of the Central Valley could only be the “draconian regulations” that “divert water from farms to a three inch fish – the Delta smelt.”<sup>1</sup>

The Sacramento-San Joaquin Valley Water Reliability Act (H.R. 1837) promises to “promote water policies that facilitate the delivery of California’s abundant supply of water, as well as support the implementation of an economically feasible and environmentally sustainable river restoration on the San Joaquin River.”<sup>2</sup> It was first introduced in the House of Representatives on May 11, 2011 and finally passed in the House on February 29, 2012.<sup>3</sup> It has now been put on the U.S. Senate Legislative Calendar for discussion and voting, with the date still yet to be announced. There are five titles to the bill:

**Title I – Central Valley Project Water Reliability**

**Title II – San Joaquin River Restoration**

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<sup>1</sup> Nunes, Devin, Kevin McCarthy, and Jeff Denham, "Sacramento-San Joaquin Valley Water Reliability Act - Historical Background." Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Historical\\_Background\\_of\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Historical_Background_of_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012), 1.

<sup>2</sup> Ibid.

<sup>3</sup> "Bill Summary & Status - 112th Congress (2011 - 2012) - H.R.1837 - All Congressional Actions," THOMAS (Library of Congress), <http://thomas.loc.gov/cgi-bin/bdquery/z?d112:HR01837:@@X> (accessed April 14, 2012).



**Title III** – Repayment Contracts and Acceleration of Repayment of Construction Costs

**Title IV** – Bay-Delta Watershed Water Rights Preservation and Protection

**Title V** – Miscellaneous<sup>4</sup>

Title I and II are the major parts of this bill because it proposes significant amendments to the Central Valley Project Reliability Act (CVPIA) and repeals precedent set by the San Joaquin River Restoration Settlement Act (SJRRSA) in favor of a simpler law for general restoration of the San Joaquin River.<sup>5</sup> The following sections will summarize the key amendments to these laws and key proposals of H.R. 1837; discuss potential costs and impacts; and present current support and opposition to the bill.

### ***Title I – Amending the CVPIA***

H.R. 1837 proposes to fundamentally change the purpose of the CVPIA, which currently prioritizes the protection, restoration, and enhancement of “fish, wildlife, and associated habitats in the Central Valley and Trinity River basins of California” by setting aside 800,000 acre-feet of water for restoration.<sup>6</sup> This bill adds a greater priority, requiring this title “to facilitate and expedite water transfers in accordance with this Act” and “ensure that water dedicated to fish and wildlife purposes by this title [the 800,000

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<sup>4</sup> "H.R. 1837, An Act - 112th Congress, 2nd Session," U.S. Government Printing Office, <http://www.gpo.gov/fdsys/pkg/BILLS-112hr1837eh/pdf/BILLS-112hr1837eh.pdf> (accessed April 22, 2012).

<sup>5</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Section-by-Section," Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Section-by-Section\\_of\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Section-by-Section_of_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012).

<sup>6</sup> "Title 34 - Central Valley Project Improvement Act (of Public Law 102-575)," U.S. Fish and Wildlife Service, [http://www.fws.gov/stockton/afrp/title34\\_printer.cfm](http://www.fws.gov/stockton/afrp/title34_printer.cfm) (accessed April 22, 2012).

acre-feet] is replaced and provided to Central Valley Project water contractors by December 31, 2016, at the lowest cost reasonable achievable.”<sup>7</sup>

**Defining “reasonable” and “anadromous”.** The next section defines the word “reasonable flows”, which is a phrase added to many parts of the bill. “The term ‘reasonable flows’ means water flows capable of being maintained taking into account competing consumptive uses of water and economic, environmental, and social factors”; this added line to the CVPIA gives equal weight to the different types of water uses, whereas environmental uses previously served as the top priority.<sup>8</sup> The term “anadromous fish” previously included all “stocks of salmon (including steelhead) striped bass, sturgeon, and American shad.”<sup>9</sup> H.R. 1837 limits this definition to *native* fish and removes the non-native striped bass and American shad from the list.<sup>10</sup>

**Contracts.** Previously the “Limitation on Contracting and Contract Reform” section, H.R. 1837 changes the section title to simply “Contracts” and eliminates everything that was previously in the section. Simplified into two clauses, the bill amends the renewal duration of contracts back to 40 years from 25 years listed in the CVPIA; and “retains the existing CVPIA provision requiring that contracts shall include a provision to charge the contractor only for water actually delivered.”<sup>11</sup> The previous version of this

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<sup>7</sup> "H.R. 1837, An Act - 112th Congress, 2nd Session," U.S. Government Printing Office, <http://www.gpo.gov/fdsys/pkg/BILLS-112hr1837eh/pdf/BILLS-112hr1837eh.pdf> (accessed April 22, 2012).

<sup>8</sup> "Redline and Review of CVPIA and Title I of H.R. 1837, as amended," U.S. House of Representatives - Natural Resources Committee – Democrats, [http://democrats.naturalresources.house.gov/content/files/2012-02-28\\_DOC\\_ComparisonHR1837\\_CVPIA.pdf](http://democrats.naturalresources.house.gov/content/files/2012-02-28_DOC_ComparisonHR1837_CVPIA.pdf) (accessed April 22, 2012).

<sup>9</sup> "Title 34 - Central Valley Project Improvement Act (of Public Law 102-575)," U.S. Fish and Wildlife Service, [http://www.fws.gov/stockton/afrp/title34\\_printer.cfm](http://www.fws.gov/stockton/afrp/title34_printer.cfm) (accessed April 22, 2012).

<sup>10</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Section-by-Section," Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Section-by-Section\\_of\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Section-by-Section_of_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012).

<sup>11</sup> Ibid.

section had elaborate rules requiring new contract applicants to first meet certain environmental criteria, but H.R. 1837 eliminates all of those rules.

**Water Transfers, Management, and Conservation.** The fourth section of H.R. 1837 amends the CVPIA's laws on water transfers in four ways. First, the bill adds language requiring the Secretary of the Interior to "take all necessary actions to facilitate and expedite transfers of Central Valley Project water" and to determine within 45 days if a water transfer proposal is complete; if not complete, the Secretary must inform the contractor what is needed for completion within that time frame.<sup>12</sup> This portion also no longer allows the Secretary to advise or impose other requirements on a transfer; the contractor retains full authority over the proposed transfer.<sup>13</sup> The second amendment the bill introduces over water transfers allows transfers to occur that could have occurred before the CVPIA was enacted. These previous water transfers were allegedly easier before the CVPIA enacted restrictions.<sup>14</sup> The next amendment eliminates the use of the word "metering" and replaces it with "measurement" to expand the number of ways water use could be measured beyond solely metering.<sup>15</sup> This section also loosens the extent to which measurements need to be done. If a contracting district's surface water is "commingled with other water supplies", it does not have to measure water use. Lastly,

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<sup>12</sup> "H.R. 1837, An Act - 112th Congress, 2nd Session," U.S. Government Printing Office, <http://www.gpo.gov/fdsys/pkg/BILLS-112hr1837eh/pdf/BILLS-112hr1837eh.pdf> (accessed April 22, 2012).

<sup>13</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Section-by-Section," Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Section-by-Section\\_of\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Section-by-Section_of_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012).

<sup>14</sup> "Redline and Review of CVPIA and Title I of H.R. 1837, as amended," U.S. House of Representatives - Natural Resources Committee – Democrats, [http://democrats.naturalresources.house.gov/content/files/2012-02-28\\_DOC\\_ComparisonHR1837\\_CVPIA.pdf](http://democrats.naturalresources.house.gov/content/files/2012-02-28_DOC_ComparisonHR1837_CVPIA.pdf) (accessed April 22, 2012).

<sup>15</sup> Ibid.

H.R. 1837 eliminates the tiered-pricing of water, which previously raised extra revenue for the Restoration Fund.<sup>16</sup>

**Fish, Wildlife, and Habitat Restoration.** H.R. 1837 amends this portion of the CVPIA to only provide “reasonable flows” for anadromous fish restoration. The previous 800,000 acre-feet minimum reserved for fish and wildlife, is now “a ceiling, rather than a floor, on the amount of water that can be taken from farmers and reallocated to the environment.”<sup>17</sup> The Secretary is directed, under H.R. 1837, to divert “any part of the 800,000 acre-feet to Agriculture or Municipal and Industrial purposes” after a reasonable amount of water has been directed to fish and wildlife.<sup>18</sup> The 800,000 acre-feet will also serve to keep water allocations at 75% for Delta users, thus also prioritizing the needs of agriculture and urban water users. H.R. 1837 adds an extra section clarifying that the Secretary’s *pursuit*, not the achievement of certain standards, of fish, wildlife, and habitat restoration would be suffice in meeting protection and other mitigation goals of the CVPIA’s restoration priorities.<sup>19</sup>

**The Restoration Fund.** The proposed bill amends this section by lifting the requirement that 67% of monies in the Restoration Fund must only be used for habitat restoring activities; all funds in for restoration can instead be used for any action item necessitated by the CVPIA.<sup>20</sup> An appended section also prohibits the Secretary from

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<sup>16</sup> "H.R. 1837, An Act - 112th Congress, 2nd Session," U.S. Government Printing Office, <http://www.gpo.gov/fdsys/pkg/BILLS-112hr1837eh/pdf/BILLS-112hr1837eh.pdf> (accessed April 22, 2012).

<sup>17</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Section-by-Section," Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Section-by-Section\\_of\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Section-by-Section_of_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012).

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> "Redline and Review of CVPIA and Title I of H.R. 1837, as amended," U.S. House of Representatives - Natural Resources Committee – Democrats,

soliciting direct and indirect contributions to the Restoration Fund; this essentially means that most of the money in the fund must come from excess revenues, which H.R. 1837 also reduces by cutting the total amount that the fund can receive in payments from \$30 million to \$15 million by December 31, 2020.<sup>21</sup> Finally, the bill establishes a Restoration Fund Advisory Board to oversee the finances of CVPIA activities and the compilation of a report that must be submitted to Congress annually; this board consists of “four CVP agricultural users, three CVP municipal and industrial users, three CVP power contractors, and two at the discretion of the Secretary.”<sup>22</sup>

**Additional Authorities.** Regarding additional contracts for storage and delivery of water from non-CVP sources, H.R. 1837 federally authorizes the Secretary to “deliver nonproject water using Central Valley Project facilities for any beneficial purpose” and does not allow payments from transferred water to go into the Restoration Fund.<sup>23</sup> The bill also strikes “non-profit” from in between “private” and “organizations”, “thereby expanding the authority of the Secretary to enter into conveyance, storage and similar contracts with all private entities.”<sup>24</sup> H.R. 1837 also reduces the time the Secretary has to “develop a plan to increase (by no later than the year 2016) the yield of the CVP to replace the ‘upfront’ water reallocated by the CVPIA for fish and wildlife purposes”, meaning any water diverted for fish and wildlife must be proportionately replaced to the

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[http://democrats.naturalresources.house.gov/content/files/2012-02-28\\_DOC\\_ComparisonHR1837\\_CVPIA.pdf](http://democrats.naturalresources.house.gov/content/files/2012-02-28_DOC_ComparisonHR1837_CVPIA.pdf) (accessed April 22, 2012).

<sup>21</sup> Ibid.

<sup>22</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Section-by-Section," Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Section-by-Section\\_of\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Section-by-Section_of_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012).

<sup>23</sup> "H.R. 1837, An Act - 112th Congress, 2nd Session," U.S. Government Printing Office, <http://www.gpo.gov/fdsys/pkg/BILLS-112hr1837eh/pdf/BILLS-112hr1837eh.pdf> (accessed April 22, 2012).

<sup>24</sup> Ibid.

CVP.<sup>25</sup> If this replacement cannot occur, then the water allocated to the environment must also be suspended.<sup>26</sup> The last amendment in this section “authorizes the construction of [additional storage] projects if non-federal funds are used.”<sup>27</sup>

**New Sections 108-111.** The final four sections of Title I make substantial additions to the CVPIA. Section 108 revives the Bay-Delta Accord and the agreement’s 1994 water quality standards and guarantee that supply would not be reduced, despite diversions to habitats. This change allows operations in line with the Accord to “proceed without regard to the Endangered Species Act of 1973 or any other law pertaining to the operation of the Central Valley Project and the California State Water Project.”<sup>28</sup>

Section 109 mandates that the Secretary of Interior and the Secretary of Commerce “shall not distinguish between natural-spawned and hatchery-spawned or otherwise artificially propagated strains of a species in making any determination under the Endangered Species Act of 1973 (ESA).”<sup>29</sup> This section would increase the number of fish by including artificially spawned fish into the count, so that the ESA is less restrictive on the revised CVPIA goals of expedient and reliable water deliveries to Delta users. Section 110 expands the service area of the Central Valley Project to “include the area within the boundaries of the Kettleman City Community Services District,

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<sup>25</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Section-by-Section," Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Section-by-Section\\_of\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Section-by-Section_of_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012).

<sup>26</sup> "Redline and Review of CVPIA and Title I of H.R. 1837, as amended," U.S. House of Representatives - Natural Resources Committee – Democrats, [http://democrats.naturalresources.house.gov/content/files/2012-02-28\\_DOC\\_ComparisonHR1837\\_CVPIA.pdf](http://democrats.naturalresources.house.gov/content/files/2012-02-28_DOC_ComparisonHR1837_CVPIA.pdf) (accessed April 22, 2012).

<sup>27</sup> "H.R. 1837, An Act - 112th Congress, 2nd Session," U.S. Government Printing Office, <http://www.gpo.gov/fdsys/pkg/BILLS-112hr1837eh/pdf/BILLS-112hr1837eh.pdf> (accessed April 22, 2012).

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

California.”<sup>30</sup> Lastly, Section 111 proposes the regulatory streamlining of applying for permits. The filing of a Notice for Determination or Exemption for any activity of the CVP would allow that activity to “be deemed to meet the requirements of Section 102(2)(C) of the National Environmental Protection Act of 1969.”<sup>31</sup>

## ***Title II – Repealing and Replacing the San Joaquin River Restoration Settlement Act***

Title II of H.R. 1837 proposes to repeal the SJRRSA (Title X of the Omnibus Public Land Management Act of 2009), which was a directive to implement the two primary goals reached in the settlement in the case, *Natural Resources Defense Council, et al. v. Kirk Rodgers, et al.*, which was settled in October 2006.<sup>32</sup> These were the two summarized goals:

*(1) The Restoration Goal - “to restore and maintain fish populations in ‘good condition’ in the main stem of the San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish”; (2) The Water Management Goal – “to reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors that may result from the Interim Flows and Restoration Flows provided for in the Settlement.”*<sup>33</sup>

H.R. 1837 repeals all terms and these goals pertaining to the settlement within the SJRRSA, thereby “terminating salmon restoration activities on the San Joaquin River, and instead establishes the San Joaquin Habitat Restoration program.”<sup>34</sup> The Secretary is prohibited from implementing any aspect of the settlement and is required instead by

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<sup>30</sup> Ibid.

<sup>31</sup> Ibid.

<sup>32</sup> "Omnibus Public Land Management Act of 2009, Public Law 111-11 - Fact Sheet," San Joaquin River Restoration Program, [http://www.restoresjr.net/program\\_library/01-General\\_Outreach/Q&AlegFactSheet0409.pdf](http://www.restoresjr.net/program_library/01-General_Outreach/Q&AlegFactSheet0409.pdf) (accessed April 22, 2012).

<sup>33</sup> Ibid.

<sup>34</sup> "Summary: H.R. 1837 - The San Joaquin Valley Water Reliability Act," California Water Commission, [https://cwc.ca.gov/Documents/2011/07\\_July/Agenda\\_Item\\_5\\_Bill%20Analyses.pdf](https://cwc.ca.gov/Documents/2011/07_July/Agenda_Item_5_Bill%20Analyses.pdf) (accessed April 22, 2012).

H.R. 1837 to enforce different restoration goals beginning in March 2013, if enacted into law. The bill declares that restoration flows must be released to Friant Dam “every year except a ‘Critical Water Year’ in a manner that improves the fishery in the San Joaquin River between Friant Dam and Gravelly Ford” to maintain a minimum flow of 50 cubic-feet per second at the bottom of Friant Dam.<sup>35</sup> A critical water year occurs “when total unimpaired runoff at Friant Dam is less than 400,000 acre feet” between March 1<sup>st</sup> and the last day of February each year.<sup>36</sup> As part of mitigating potential impacts from restoration flows, the bill proposes to amend the existing law so that the Secretary is required to identify potential impacts of restoration flows on downstream landowners, who may receive less water.<sup>37</sup> Title IV of H.R. 1837 also declares that it “preempts and supersedes and State law, regulation, or requirement that imposes more restrictive requirements or regulations on the activities authorized under this title.”<sup>38</sup> The bill continues to repeal most parts of SJRRSA by placing “limitations on contributions”, eliminating \$50 million dollars in previous funding for the settlement, and striking the remaining “\$250 million in authorized funding” for salmon restoration and water management.<sup>39</sup>

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<sup>35</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Section-by-Section," Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Section-by-Section\\_of\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Section-by-Section_of_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012).

<sup>36</sup> "Summary: H.R. 1837 - The San Joaquin Valley Water Reliability Act," California Water Commission, [https://cwc.ca.gov/Documents/2011/07\\_July/Agenda\\_Item\\_5\\_Bill%20Analyses.pdf](https://cwc.ca.gov/Documents/2011/07_July/Agenda_Item_5_Bill%20Analyses.pdf) (accessed April 22, 2012).

<sup>37</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Section-by-Section."

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.



### ***Title III-V: Repayments, Protection of Water Rights, and Miscellaneous***

The remaining three titles of H.R. 1837 are brief and establish new policies regarding repayment of contracts' construction costs, Bay-Delta Watershed water rights protection, and the supremacy of this potential Federal law over state laws. Title III "directs the Secretary, upon the request of a contractor, to convert all long-term Central Valley Project contracts "from repayment contracts that charge annual installments not alter by the actual amount of water delivered, to water service contracts that charges "a combined capital and operation and maintenance charge" for each acre-foot of water delivered.<sup>40</sup> The rest of Title III presents policies to expedite when contractors repay loans from the federal government for construction projects.<sup>41</sup> Title IV directs the Secretary to honor water rights laws and area-of-origin protections; it "ensures that the Endangered Species Act is implemented in a manner that honors the priorities delineated above" of protects water rights, first and foremost.<sup>42</sup> The next section of Title IV applies this same prioritizing principle to Sacramento River Settlement Contracts and then specifies in the section after that the minimum allocations "agricultural water service contractors within the Sacramento River Watershed" are to receive in any type of water year.<sup>43</sup> These contractors are to receive "not less than 100% of their contract quantities in a 'Wet', 'Above Normal', and 'Below Normal' water year; Not less than 75% of their contract quantities in a 'Dry' water year; and, not less than 50% of their contract quantities in a 'Critically Dry' water year."<sup>44</sup> Title V, entitled "Miscellaneous" is a brief

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<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

precedent section establishing “Federal supremacy to protect existing water rights” over state laws in coordinated operations of the CVP and SWP; it further clarifies that this establishment of law would be “unique to California and the Act shall not serve as a precedent in any other state.”<sup>45</sup>

### ***Estimated Impacts of H.R. 1837***<sup>46</sup>

The Congressional Budget Office (CBO) prepared a cost estimate of H.R. 1837 and released it on February 27, 2012, just days before the bill’s passage in the House. It estimates that Title I will “result in additional offsetting receipts of \$1 million annually because water use would increase.” Offsetting receipts are payments to the government that serve to reduce cost budgets of certain authorities, but are not considered revenues.<sup>47</sup> Water transfers and use are expected to increase as a result of loosened environmental regulation, but no other costs are expected with Title I despite the shifting of regulations.

Funds originally authorized for the SJRRSA will be removed by Title II of H.R. 1837, providing an expected savings of \$300 million dollars over the 2013-2022 period (See Appendix H). The SJRRSA previously required the restoration of approximately 153 miles in the San Joaquin River; Title II reduces that to 65 miles and maintains a minimum standard for flows.

Title III would expedite the repayment of capital investment by CVP customers. CBO estimates that the government will receive a total of \$244 million over the 2013-

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<sup>45</sup> Ibid.

<sup>46</sup> Everything but the last section of this part is credited to the following report:

"Cost Estimate - H.R. 1837: Sacramento-San Joaquin Valley Water Reliability Act," Congressional Budget Office, <http://www.cbo.gov/sites/default/files/cbofiles/attachments/hr1837.pdf> (accessed April 22, 2012).

<sup>47</sup> "Section 20 - Terms and Concepts," The U.S. White House, [http://www.whitehouse.gov/sites/default/files/omb/circulars/a11/current\\_year/s20.pdf](http://www.whitehouse.gov/sites/default/files/omb/circulars/a11/current_year/s20.pdf) (accessed April 22, 2012).

2022 period in accelerated payments. Because many of these payments will be subject to federal taxing, the CBO Joint Committee on Taxation estimates a revenue loss of \$33 million over the same period (See Appendix H).

Lastly, the CBO estimates there will be impacts on state, local, and tribal governments that will not exceed the annual threshold of \$73 million dollars defined in the Unfunded Mandates Reform Act (UMRA). These impacts come from the mandates set forth in H.R. 1837 that preempt state laws and require changes in activities pertaining to water management and wildlife restoration. The exact effects of these impacts could not be estimated and the CBO specifies that “the legislation contains no private-sector mandates.”<sup>48</sup> Given the monetary savings, yet stripped environmental regulations of this bill, there is both extreme support and opposition to H.R. 1837.

### ***Support and Opposition to H.R. 1837 – Division in Politics and Among Stakeholders***

Since its introduction to the Natural Resources Committee, H.R. 1837 has been highly contentious on Capitol Hill. The sponsors, Rep. Nunes, McCarthy, and Denham, are all Republicans of districts in the Central Valley with big agricultural operations, such as Kern and Fresno County. On the Democrat side promoting environmental values and restoration, Rep. Grace Napolitano and Rep. Edward Markey serve as ranking members of the Subcommittee on Water and Power and Natural Resources Committee, respectively.<sup>49</sup> These two sides have argued incessantly over the bill since its release in May 2011.

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<sup>48</sup> "Cost Estimate - H.R. 1837: Sacramento-San Joaquin Valley Water Reliability Act," Congressional Budget Office, <http://www.cbo.gov/sites/default/files/cbofiles/attachments/hr1837.pdf> (accessed April 22, 2012).

<sup>49</sup> This information is all personal knowledge from my experience working in the House of Representatives.

Congressman Nunes released a revised version of his report, “Distorted Water”, in 2012 to present his arguments for why H.R. 1837 should be passed. He attempts to counter 20 water myths with facts, none of which are supported with sources. However, one apparent fact supporting H.R. 1837 is that despite restoration efforts since 1992, salmon populations have still dramatically declined (See Appendix I). Nunes argues that his bill “recovers the lost water that was dedicated to a failed \$1 billion salmon restoration plan” and “reduces the debt” of the country through the repeal of the SJRRSA and the accelerated capital repayment system.<sup>50</sup> Much of his fury stems from the “10% water allocation to people south of the Delta” in his district in 2009, so H.R. 1837 vows to equilibrate water received by all stakeholders by bringing priorities for restoration, agriculture, and urban usage onto the same level.<sup>51</sup>

The Democrats later released their own report, “Cutting Off the Headwaters”, to counter Distorted Water with overwhelming number of excerpts of opposition to the bill from various groups. Despite H.R. 1837’s supposed acknowledgement of water rights laws and area-of-origin rights, Rep. John Garamendi received confirmation during a June 13, 2011 hearing that “this bill, in its present form, would remove [certain counties’] rights and substitute federal law.”<sup>52</sup> The remainder of the report continues to highlight testimonies of important people, such as Secretary of Interior Ken Salazar, California U.S. Senators Dianne Feinstein and Barbara Boxer, and several leaders from fisheries and

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<sup>50</sup> Nunes, Devin, "Distorted Water 2012." Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Distorted\\_Water\\_2012g.pdf](http://nunes.house.gov/UploadedFiles/Distorted_Water_2012g.pdf) (accessed April 22, 2012).

<sup>51</sup> Ibid.

<sup>52</sup> "Cutting Off the Headwaters - Analysis of H.R. 1837, the San Joaquin Valley Water Uncertainty Act," U.S. House of Representatives - Natural Resources Committee – Democrats, [http://democrats.naturalresources.house.gov/sites/democrats.naturalresources.house.gov/files/content/files/2012-02-16\\_RPT\\_HeadwatersReport.pdf](http://democrats.naturalresources.house.gov/sites/democrats.naturalresources.house.gov/files/content/files/2012-02-16_RPT_HeadwatersReport.pdf) (accessed April 22, 2012).

fish-related agencies.<sup>53</sup> A commonly echoed message against H.R. 1837 in the report is how the bill would run “contrary to the long established tradition of Congressional and court deference to states on water resource decisions”, even if the bill specifies in Title V that this form of federal supremacy is not to become a precedent.<sup>54</sup> Alongside this hostile debate on Capitol Hill, California stakeholders have also given strong responses to the bill.

Nunes released a list of supporters for H.R. 1837 in 2012, which can be compared to the list of opposition to the bill that is on the “Cutting Off the Headwaters” report. Organizations in support of H.R. 1837 are comprised of mainly water agencies who serve the part of the Delta that the bill is promising more water to, state elected leaders who are primarily Republican or serve districts south of the Delta, cities that the bill would automatically benefit, and national farm organizations and business organizations who would benefit from a streamlined process for obtaining water.<sup>55</sup> Organizations in opposition to the bill are primarily states with several fishing groups, elected officials who are either Democrats or serve parts of the Delta where restoration is more valued than increased water supply, newspapers with perceived liberal leaning, water districts not benefiting from the bill, environmental groups and fishing groups concerned with the bill’s removal of restoration waters, and a few business groups also not from south of the Delta.<sup>56</sup> Most of these organizations have already written letters to Congress expressing their position, but the bill remains in deadlock because agriculture and cities south of the

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<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> "Sacramento-San Joaquin Valley Water Reliability Act - Organizations in Support," Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Support\\_for\\_the\\_Sacramento-San\\_Joaquin\\_Valley\\_Water\\_Reliability\\_Act.pdf](http://nunes.house.gov/UploadedFiles/Support_for_the_Sacramento-San_Joaquin_Valley_Water_Reliability_Act.pdf) (accessed April 22, 2012).

<sup>56</sup> "Cutting Off the Headwaters - Analysis of H.R. 1837, the San Joaquin Valley Water Uncertainty Act."

Delta are in favor of the bill, while all other stakeholders (environmental and additional urban users) see the benefit of this bill being reaped only by a few.

### ***Analytical Conclusions about H.R. 1837***

Despite H.R. 1837's proposal to address several valid problems with the Bay-Delta, the bill produces greater problems politically and legally because it is inappropriately a piece of federal legislation intended to place mandates on an area where state and local laws should prevail. This desperate water grab from fish and wildlife restoration negates the few portions of the bill that do propose constructive improvements for the Delta. Even though advocates for the Delta ecosystem are opposed to leveling the priority of fish and wildlife with agricultural needs, H.R. 1837 raises an important objection, by making these priorities equal, to the amount of attention restoration has received in recent years. Yes, the Delta certainly needs restoration if California intends to keep using its water; however, it is disconcerting that increased water flows and efforts to restore the Delta do not seem to have yielded any improvements. H.R. 1837 does not approach this objection in an acceptable or negotiable way. The bill goes a step too far in drastically striking clauses right and left out of the CVPIA and appending policies that would allow this bill to supersede landmark environmental regulations, like the Endangered Species Act and the National Environmental Policy Act. The extremity of these proposed policies make negotiation and compromise near-impossible, when the Democrats feel that decades of work for the environment are being erased. South-of-the-Delta users are understandably frustrated with their water situation and long for days before the 1987 drought and the CVPIA when acquiring enough water for their arid land

was not a problem. They want the equal share of water they were promised in the Bay-Delta Accord and refuse to see that times have changed. This bill is too fixated on restoring sufficient flows to agriculture and therefore potentially short-sighted when it comes to ensuring the longevity of the Delta. The streamlined processes and simplified standards of H.R. 1837 may not be maintainable in the long-run, such as mandating the minimum percentage of water that contracts must receive. These proposed changes are no better than the same existing environmental restrictions that the sponsors of this bill are aiming to change.

Another major concern with H.R. 1837 is the bill's lack of scientific backing. No information could be found on the potential effects of reducing flows to habitat and increasing water exports. Nunes claims in "Distorted Water" that the bill "replaces junk-science with sound science", but does not give proof to support that statement.<sup>57</sup> While it has yet to be fully determined if increased Delta-pumping directly correlates to decline in fish populations,<sup>58</sup> it is common sense that taking water away from a fish will harm it. Nunes does not address the question of how fish will be affected by the shifting of their current water allocation to water users in the Delta.

H.R. 1837 claims that its primary goals are to create a water supply that is more reliable and "meaningful cooperation among stakeholders", but minor amendments demonstrate its underlying interest in favoring certain Delta users.<sup>59</sup> As one example, the bill proposes the establishment of a Restoration Fund Advisory Board. The sponsors of H.R. 1837 only mandated that the board have agricultural, municipal, industrial, and

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<sup>57</sup> "Distorted Water".

<sup>58</sup> Ibid. Graph entitled "Delta Inflow and Correlating Salmon Population" shows the lack of correlation

<sup>59</sup> Ibid.

water contractor groups represented plus “two at the discretion of the Secretary.”<sup>60</sup> This is a bad and blatant attempt to leave out environmental, fishing, and tribal stakeholders. Though the Secretary has a choice of two members, there is no guarantee that these groups will be represented if the bill becomes enacted. This underlying notion that H.R. 1837 is intended to benefit just a small portion of Delta users takes away the credibility of the plan as a federal bill.

For the reasons previously listed, H.R. 1837 is not a productive solution to shortages and problems in the Bay-Delta. The political nature of the bill has kept Congress from having any real discussions about real solutions. They just keep shifting water from one group to another. While sponsors of H.R. 1837 have their political motivations, opponents to H.R. 1837 have also done nothing to contribute constructively to this water debate. The fundamental split in the two parties’ views on the environment prevents any change from happening in the Delta. The two parties must put many of their differences aside and come forth with a truly bipartisan proposal, not the current definition of “bipartisan” where a mere few vote with the other party. The war over the Delta has only gotten worse from the introduction of this bill, but there is uncertainty in how much longer these battles can continue.

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<sup>60</sup> "H.R. 1837, An Act - 112th Congress, 2nd Session".



## **Chapter 5: Is the Water War Over Yet?**

The previous sections on the Bay-Delta Conservation Plan (BDCP) and H.R. 1837, the Sacramento-San Joaquin Valley Water Reliability Act, served to explain and show two of the most widely recognized and realistically considered proposals for addressing problems in the Delta. When compared together, there are positive aspects the two plans share, negative aspects that they share, and aspects where they completely differ. This paper has already determined both to be unfit plans for resolving the Delta in the long-run, so this comparison will serve to answer why this is true. Upon examining the CALFED, BDCP, and H.R. 1837, how are these elaborate proposals still unable to fix the Delta? Can the Delta even be fixed? Delta experts have formulated answers to these questions, which will be presented in this section.

### ***BDCP vs. H.R. 1837: Who will win?***

These two plans are competing proposals, especially because the BDCP is a state-developed plan and H.R. 1837 is federally-developed. As already established, H.R. 1837 proposes to supersede state laws, so is it possible for these two proposals to co-exist? Kate Poole, Senior Attorney at the Natural Resources Defense Council office in San Francisco, published a post expressing how the passage of H.R. 1837 would cause the death of the BDCP.<sup>1</sup> First and foremost, a federally mandated law like H.R. 1837 could override anything established by the BDCP, especially because the two proposals actually

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<sup>1</sup> Poole, Kate, "HR 1837 and the Death of the Bay Delta Conservation Plan," Switchboard, from NRDC, [http://switchboard.nrdc.org/blogs/kpoole/hr\\_1837\\_and\\_the\\_death\\_of\\_the\\_b.html](http://switchboard.nrdc.org/blogs/kpoole/hr_1837_and_the_death_of_the_b.html) (accessed April 22, 2012).

differ greatly. H.R. 1837 proposes loosening of federal and state environmental regulations; it also focuses on expediting water transfers out of the Delta to agricultural users and away from fish and wildlife habitats. BDCP's biggest component is the construction of a peripheral canal in compliance with federal and state environmental regulations; increased habitat restoration is the BDCP's other primary goal. The BDCP increases spending on restoration and water exports; H.R. 1837 decreases spending on restoration and is estimated to generate increased revenues through expedited water transfers.<sup>2</sup> Financially, the two are already very different. Poole argues that H.R. 1837 would have a "destructive effect" on BDCP's "consensus-based efforts to improve California's water system" and "make authorizing a new peripheral canal impossible."<sup>3</sup> Devin Nunes argues that his bill would not do either of those things. He claims that "H.R. 1837 creates a framework for meaningful cooperation among stakeholders" and that "nothing in the bill would prevent completion of the BDCP."<sup>4</sup> However, he notes that "if this bill were enacted as written the construction of an isolated delta conveyance system will no longer be needed" because H.R. 1837 would allegedly increase exports enough to fill the need of the canal.<sup>5</sup> Thus in a legal context, H.R. 1837 would overshadow the BDCP, if enacted.

However, the political climate suggests that the BDCP will prevail because it is on a faster track towards implementation. When H.R. 1837 passed in the Republican-run House, the White House put out a press release stating that "were the Congress to pass

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<sup>2</sup> These statements were all previously cited and established in the previous chapters.

<sup>3</sup> Poole, Kate, "HR 1837 and the Death of the Bay Delta Conservation Plan".

<sup>4</sup> Nunes, Devin, "Distorted Water 2012." Congressman Devin Nunes | 21st District of California, [http://nunes.house.gov/UploadedFiles/Distorted\\_Water\\_2012g.pdf](http://nunes.house.gov/UploadedFiles/Distorted_Water_2012g.pdf) (accessed April 22, 2012).

<sup>5</sup> Ibid.

H.R. 1837, the President's senior advisors would recommend that he veto the bill.”<sup>6</sup>

Given the Democrat-led Senate, H.R. 1837 is not likely to pass through Congress. The Obama Administration also stands behind the BDCP in the press release stating that “H.R. 1837 would undermine five years of collaboration between local, State, and Federal stakeholders to develop the Bay-Delta Conservation Plan.<sup>7</sup> This of course means that the BDCP is likely to beat H.R. 1837 in head-to-head competition. However, even the BDCP has its flaws, as mentioned in Chapter 3.

### ***What the BDCP and H.R. 1837 Both Get Right and Wrong***

The one positive attribute that both of these plans share is their dissatisfaction with the status quo. While both proposals are far from perfect, any action is better than no action as this point in time. Given the history of the Bay-Delta, the health of the estuary is quickly declining and it soon will not be able to deliver California its water needs. CALFED tried to make foundational changes to the Delta, but could not follow through. The current plans on the table suggest that California is seeking a solution, but these solutions are not revolutionary enough.

It is important to have a well-supported understanding of the Delta's current state and its predicted future. The California Department of Water Resources published an executive summary of its Delta Risk Management Strategy – Phase I in February 2009.

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<sup>6</sup> Executive Office of the President, Office of Management and Budget, "Statement of Administration Policy: H.R. 1837 – Sacramento-San Joaquin Valley Water Reliability Act," The U.S. White House, [http://www.whitehouse.gov/sites/default/files/omb/legislative/sap/112/saphr1837\\_20120228.pdf](http://www.whitehouse.gov/sites/default/files/omb/legislative/sap/112/saphr1837_20120228.pdf) (accessed April 22, 2012).

<sup>7</sup> Ibid.

Phase I was the conducting of a risk analysis and the release of a concluding report.<sup>8</sup> The report “concludes that under business-as-usual practices, the Delta Region as it exists today is unsustainable” because “seismic risk, high water conditions, sea level rise and land subsidence threaten levee integrity.”<sup>9</sup> A finding to support this estimate of risk states that “a major earthquake or magnitude 6.7 or greater in the vicinity of the Delta Region has a 62 percent probability of occurring sometime between 2003 and 2032.”<sup>10</sup> The problem is that the Delta Regions has not experienced an earthquake of this magnitude yet and may not be equipped for such levee failures. The report essentially states that significant impacts to water exports, ecosystems, and municipal districts would be inevitable if these disasters occur. This is why action must be taken on the Delta.

While BDCP and H.R. 1837 propose action, several mutually negative aspects keep these plans from being the resolution to the Delta’s risk of failure. The first aspect that the two plans share is their reliance on previously proposed legislation. The BDCP reignites the peripheral canal discussion for the *third time* in the past five decades. When the environment became a concern, the idea was scrapped for its ambiguous environmental impacts. With the release of the BDCP Effects Analysis, the impacts are now clear. As much as California needs a reliable water supply, investment in old ideas does not reflect the new state of the Delta. If there is a possibility of a natural disaster causing levee failure in the Delta Region before 2032, then a 50-year long BDCP is not practical. H.R. 1837 experiences the same problem with regards to the Bay-Delta Accord.

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<sup>8</sup> "Delta Risk Management Strategy - Phase I Executive Summary." California Department of Water Resources. [http://www.water.ca.gov/floodmgmt/dsmo/sab/drmsp/docs/drms\\_execsum\\_ph1\\_final\\_med.pdf](http://www.water.ca.gov/floodmgmt/dsmo/sab/drmsp/docs/drms_execsum_ph1_final_med.pdf) (accessed April 22, 2012).

<sup>9</sup> Ibid, 2.

<sup>10</sup> Ibid.

The wonderful compromise of the agreement was indeed a model that should be replicated now, but the quantity of the allocations cannot remain the same as they were in 1994 when population in California has increased by several million people and the amount of water in the Delta is different every year, but not on a steady rise to accommodate growth. The fact that H.R. 1837 idolizes the Bay-Delta Accord to the extent that its revival of the Accord trumps all existing water allocation regulations does not suggest that the bill is promoting sound science, like it claims. Despite allocations not always being fair, historical increases to restoration funds was based on societal increases in ecological knowledge. As people became more environmentally aware, priorities began to change. Necessary reform for the Delta should not be based on solely historical ideals; a true solution needs to incorporate understanding of what direction the Delta is heading and where California actually needs it to go in order to remain the life source of water.

Next, both of the plans promote the increase of water exports. While this is acceptable in the short-run, there will eventually not be enough water to continue increasing exports. As exports are maintained, true water conservation measures need to be implemented long-term. On the other hand, California can try to capture more water through storage facilities, but the unpredictability of precipitation makes that a risky and expensive alternative. Conservation of water is the only cost-effective, guaranteed way of preventing an increased reliance on water. “Conservation” here refers to practices that achieve a net savings in water, after factoring in costs of implementation.

When it comes to habitat and wildlife restoration, neither plan has a clear direction for restoration goals. The two proposals are on opposite sides of this problem.

The BDCP on the one hand intends to invest a significant amount of resources into habitat restoration, but does not set concrete, scientifically-backed standards. The construction of the canal is also potentially counterproductive to restoration goals, as mentioned in Chapter 3. There is a large uncertainty as to whether or not the net adverse effects of building a peripheral canal would be greater than the net beneficial effects of restoration projects under the BDCP. Although preparers of the BDCP will continue to refine the plan before implementation, keeping the canal project is likely to bring very little improvements to the plan. H.R. 1837 takes a completely different approach to restoration. Because of the unclear results of previous increases in restoration efforts, H.R. 1837 proposes to reduce environmental protection activities. This is a logically flawed approach to the ecological problem of the Delta. Without scientific evidence, the sponsors of H.R. 1837 try to justify taking water away from restoration just because the increased flows have not appeared to restore fish populations. While there is no immediate solution to this lack of clarity in restoration projects, science needs to play a bigger role in these types of policy decisions so that California is neither throwing money blindly into restoration nor giving too little to fish and wildlife.

The final reason, and perhaps the most difficult to fix reason for why both the BDCP and H.R. 1837 cannot resolve problems within the Delta is the utter lack of compromise that exists in both plans. In Chapter 3, BDCP was deemed unable to live up to its name. Critics of the BDCP see the obvious skew towards the peripheral canal in funding and proposed implementation. Despite the plan's initially long list of planned goals and conservation objectives, conservation of habitat and species appear to play a distant second to the peripheral canal, which intends to ship water from the north to the

south. This creates a re-emerging issue with the peripheral canal: water users in Northern California have no reason to support it because it seems to be another water grab masked by promises of restoration. H.R. 1837 creates a similar problem because its sponsors all come from the same part of the Delta and the same political party. As much as the bill worships the Bay-Delta Accord, it certainly does very little to live up to the agreement's example of compromise. If there is to be a new federal law regulating the Delta, it should have bi-partisan sponsorship. This is where CALFED had previously outshined the current two plans. CALFED participants had genuine interest in meeting the needs of all Delta stakeholders, with no political agenda attached; however, it could not meet its ambitious goal of harmony in the Delta.

### ***The Bay-Delta: To Be or Not To Be a Zero-Sum Game?***

If CALFED could not solve the Delta problem and current proposals also lack the necessary tools to achieve a balanced solution, the future of the Delta looks bleak. Can a solution for the Delta ever be found? Michael Hanemann and Caitlin Dyckman are skeptical. In their article, "The San Francisco Bay-Delta: A failure of decision-making capacity", they present the now commonly referred-to argument that the Delta is a zero-sum game. A zero-sum game is a game theory concept where "a higher payoff value to one party implies a lower payoff value to one or more other parties", resulting in a net change of zero.<sup>11</sup> The authors argue that water transfer and supply issues in the Delta have remained "unresolved in California for six decades because (1) it involves a fundamental opposition of interests, (2) this opposition of interests makes a voluntary

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<sup>11</sup> Hanemann, Michael, and Caitlin Dyckman, "The San Francisco Bay-Delta: A failure of decision-making capacity," (*Environmental Science & Policy* 12, no. 6, 2009), 711.

solution unlikely because of the game-theoretic considerations described above, and (3) the SWRCB's (State Water Resources Control Board) strategy of relying on voluntary agreement to resolve the issue is fundamentally misconceived and is, at some level, an abdication of its responsibility."<sup>12</sup> While Hanemann and Dyckman frame the Delta as a zero-sum game, they ultimately conclude that not only a lack of cooperation, but also a lack of authority has caused the on-going stalemates over the Delta. During the CALFED era, the Bay-Delta Program at the time was a wonderful "vision without authority"; overall, the SWRCB is attributed the most blame for inefficiently expecting stakeholders to voluntarily come to agreement on a solution.<sup>13</sup> However, the nature of Delta negotiations arguably results in a zero-sum game where solutions do not exist, so an authority, like the SWRCB, should step in and ultimately make important decisions.

Kaveh Madani and Jay R. Lund agree with Hanemann and Dyckman's conclusions, with the exception of the Delta actually being a zero-sum game.<sup>14</sup> In their report, "California's Sacramento-San Joaquin Delta Conflict: from Cooperation to Chicken", Madani and Lund use actual game theory tables to illustrate the Delta is *not* a zero-sum game. They argue that the "Delta problem seems unlikely to be a zero-sum game, as the Delta's water, cost, land, and risk sharing are all linked with multiple decisions" made over differing amounts of time with various preferences; the mix of these variables is unlikely to cause a conflict.<sup>15</sup> However, costs and risks that arise are likely to prevent "a cooperative solution even within a non-zero sum structure, as

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<sup>12</sup> Ibid, 712.

<sup>13</sup> Ibid, 722-23.

<sup>14</sup> Madani, Kaveh, and Jay R. Lund, "California's Sacramento-San Joaquin Delta Conflict: From Cooperation to Chicken," (Journal of Water Resources Planning and Management 138, no. 2, 2011), [http://ascelibrary.org/wro/resource/1/jwrmd5/v138/i2/p90\\_s1?isAuthorized=no](http://ascelibrary.org/wro/resource/1/jwrmd5/v138/i2/p90_s1?isAuthorized=no) (accessed March 21, 2012), 7.

<sup>15</sup> Ibid, 9.



happened in the CALFED framework.”<sup>16</sup> The authors make an interesting observation here about how the CALFED framework was not a zero-sum framework. The program had all of the right objectives of collaboration, collective decision-making among stakeholders, and achievement of mutually beneficial processes; yet, CALFED was still unsuccessful.<sup>17</sup> Madani and Lund find that a solution could not be accomplished because of the variables previously mentioned of time, preferences, and risk. Despite having the goal achieving a cooperative solution, this achievement “should not be expected in a reasonable timeframe”, meaning that the time it takes for a solution to actually be implemented is significantly longer than the amount of time stakeholders can wait and still see value in the cooperative solution.<sup>18</sup> CALFED perfectly depicts this scenario. When it was first established, California was hopeful up and down the state. However, as time drew on and implementation was slow, stakeholders began to increasingly notice the financial risk and large amount of time put into the project. Eventually, these stakeholders transitioned from their initial sense of resolve to a feeling of serious risk. This feeling of bearing a lot of burden or being the victim is what the authors here define as “Chicken”.<sup>19</sup> Hence, the authors describe the Delta problem as an evolution “from cooperation to Chicken”.<sup>20</sup> The problem lies not in the proposed solutions, but rather the changing perception of what is at stake. Madani and Lund conclude that there either needs to be “powerful mechanisms which provide incentives for cooperation or penalties for deviation from cooperation” or better yet, “strong, responsible governing

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<sup>16</sup> Ibid.

<sup>17</sup> Ibid, 10.

<sup>18</sup> Ibid, 11.

<sup>19</sup> Ibid, 1. Chicken also refers to the swimming pool game where the ‘Chicken’ has to carry a person on his or her shoulders.

<sup>20</sup> Ibid, 19.

mechanisms”, who must either “‘govern’ the Delta or eventually pay for absence of effective governance.”<sup>21</sup>

The points presented in both of these journal articles are similar and valid. Despite seeming like they disagreed on the zero-sum game, Madani and Lund’s argument can be interpreted more as an expansion of Hanemann and Dyckman’s argument. The attempts California and the U.S. have made towards resolving the Delta have seemed to be zero-sum games because of how stakeholders perceive outcomes. In actuality, the payoff from the Delta can be quantified in the eyes of the recipient as any amount, in any proportion to the payoff for another recipient. Thus, the zero-sum game is merely an excuse for the fact that stakeholders refuse to cooperate after a certain point when self-interest decides that the risk is greater than the need to cooperate.

In response to questions presented at the start of the chapter: California’s water war over the Delta is far from over. Legislative attempts to fix the Delta have failed not because of inherent flaws, but rather the increasing unwillingness of stakeholders to compromise. This unwillingness stems from a sense of urgency from each stakeholder’s respective point of view. Environmentalists see the increasing need for restoration in the Delta; agricultural interests see the increasing need for sufficient water allocations to carry out their operations; and cities see the increasing need for water to accommodate population growth. With the Delta in high demand and quick decline, finding a solution has become increasingly difficult since the 1990s, but is still possible if stakeholders look past potential risks and truly cooperate with each other.

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<sup>21</sup> Ibid.

## **Chapter 6: Conclusion**

On March 30, 2012, the Sacramento Bee published an article with the headline, “Prestigious panel agrees: Delta is stressed, with no easy fix.” This news falls under the figurative “Truth Hurts” category of Delta information. Seventeen scientists from “various disciplines and regions of the country” participated in compiling the study over the course of two years under the National Research Council.<sup>1</sup> The scientist panel deems the word “scarcity” “as a new watchword for its statewide water supplies. That doesn’t mean doing without, but recognizing everyone can’t always have all the water they want.”<sup>2</sup> The report’s first definition is of the word “scarcity”; the description is as follows:

*“Scarcity means that there is simply not a sufficient quantity of some resource or commodity to satisfy all wants for it. Scarcity is a pervasive phenomenon and it is persistent. Water scarcity has always been a fact in California (save, perhaps, for unusually wet periods), and therefore the committee cannot evaluate the items in its charge without addressing scarcity. The magnitude or intensity of scarcity has grown over time and it continues to grow because demands have grown. There are numerous manifestations of scarcity. For example, legal rulings that require larger allocation of water to support fisheries and environmental flows are a manifestation of scarcity. Concerns about the Delta itself and differing positions about how Delta waters should be allocated are also manifestations of scarcity. The failure to acknowledge scarcity as a fact of life and to craft water plans and policies to address scarcity has made the management of Delta waters far more difficult than it needs to be.”<sup>3</sup>*

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<sup>1</sup> Weiser, Matt, "Prestigious panel agrees: Delta is stressed, with no easy fix," The Sacramento Bee - California News, Local News, <http://www.sacbee.com/2012/03/30/4377538/prestigious-panel-agrees-delta.html> (accessed April 23, 2012).

<sup>2</sup> Ibid.

<sup>3</sup> *Sustainable Water and Environmental Management in the California Bay-Delta*. (Washington, D.C.: National Academies Press, 2012) 4.

The tone of the description sounds as if California is being told for the first time of its water scarcity by noting that it “has always been a fact”. What is even more striking is how the scientists selected the “allocation of water to support fisheries and environmental flows” to exemplify a manifestation of scarcity. The stakeholders who typically support those types of allocations are likely to be the ones reading the Sacramento Bee and this report. It appears that the scientists strategically want to convey that every single type of stakeholder is guilty for the historical poor management of the Delta. All who are concerned with the Delta and have a specific position on how to manage it contribute to the manifestation of scarcity because these people do not “acknowledge scarcity as a fact of life”. It is time to move away from self-interested opinions and move towards a community-oriented point of view on the Delta.

When the Central Valley Project and State Water Project were constructed, their main purpose was to provide water to the community of California. Despite the fact that building during that time what is now a declining water infrastructure may have helped manifest scarcity, the nation and the State of California united behind these projects. As realizations of environmental impacts emerged, stakeholders of Delta water began finding it harder and harder to see management of the Delta in the bigger picture of community. Interests became fragmented into three groups: environmental, agricultural, and municipal users. The first experience of scarcity California ever truly faced was the drought from 1987 to 1992, when the three groups of stakeholders each faced severe reductions in water. Fish and wildlife needs could not be undermined any longer as incrementally more species had to be listed as threatened or endangered, which led to the Central Valley Project Improvement Act. A sense of competition began to emerge

between different water users, so the Bay-Delta Accord had to be signed before matters worsened. This led to the development of a plan to mitigate these competing concerns. CALFED originally embodied a community-oriented ideal of ensuring sufficient water for everyone, but it did not incorporate a concept of scarcity. Back during the program's planning stages in the 1990s, scarcity was even more of a foreign concept to California than it is now. The program failed to deliver on its cooperative ideals and stakeholders began to lose an understanding of what was compromise.

The current Bay-Delta Conservation Plan (BDCP) and Sacramento-San Joaquin Valley Water Reliability Act (H.R. 1837) are byproducts of this historical failure. Instead of fully capturing the cooperative essence of CALFED, both plans marginalize at least one set of water interests. The BDCP is trapped somewhere between wanting to deliver water to Southern California and wanting to restore wildlife and habitat; whereas, H.R. 1837 is stuck in agriculture's bitterness towards environmental protections and diversions of water to restoration projects. Both plans have a selective interpretation of "scarcity" for whomever their proposals aim to help. Back and forth in the political realm, elected officials and leaders of agencies debate without actually ever listening to the other side. The Delta appears to be in the grasps of incapable hands trying to split the estuary into pieces. The war over the Bay-Delta wages on with no end in sight.

The last thing the declining Delta needs to be is a battlefield. Despite cooperation appearing impossible due to polarized positions on the Delta, there is still hope for peace. In the long-term, the Delta needs its stakeholders to crave cooperation, community, and compromise; otherwise the state of California will remain divided with less and less water to drink.

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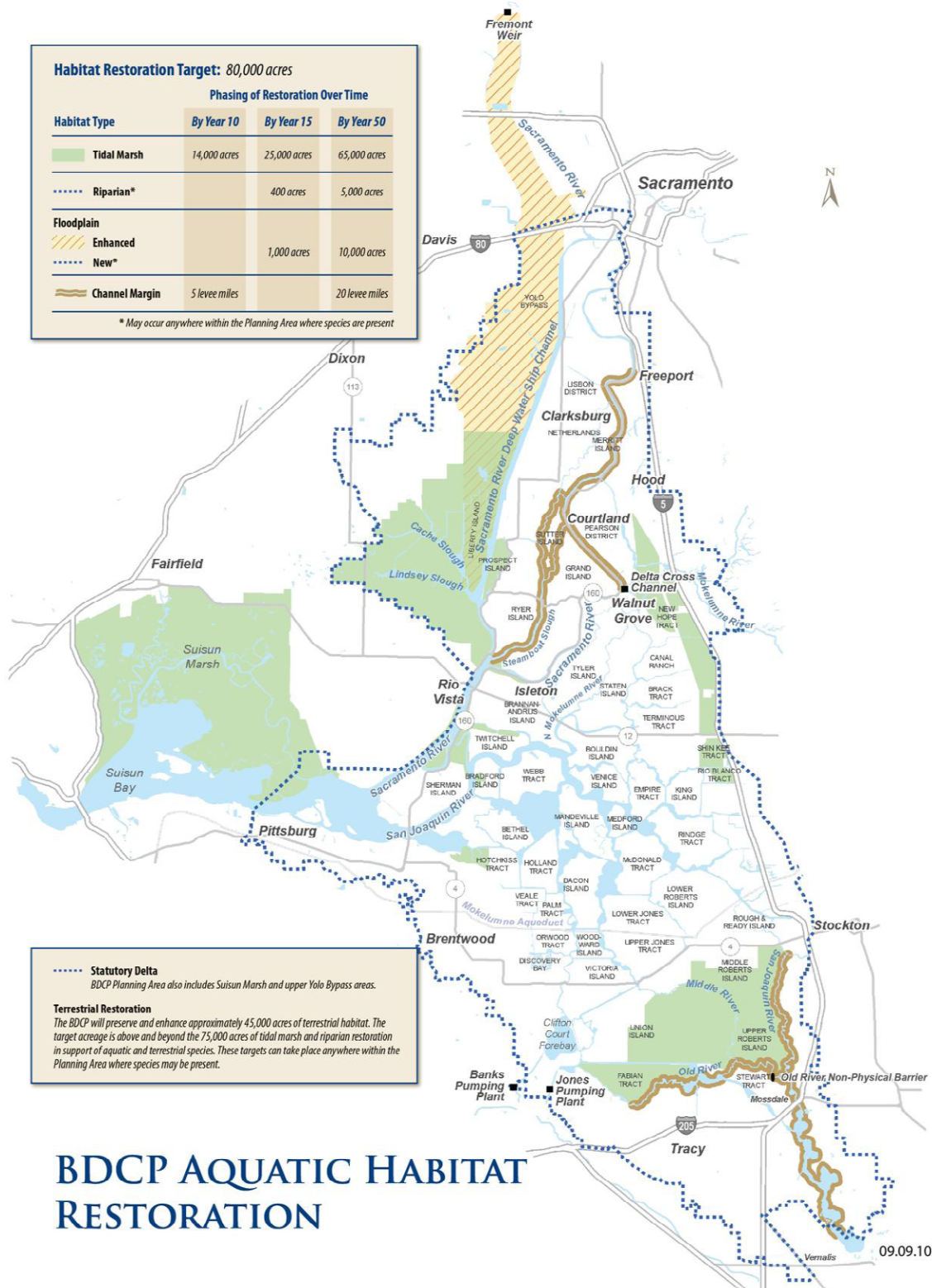
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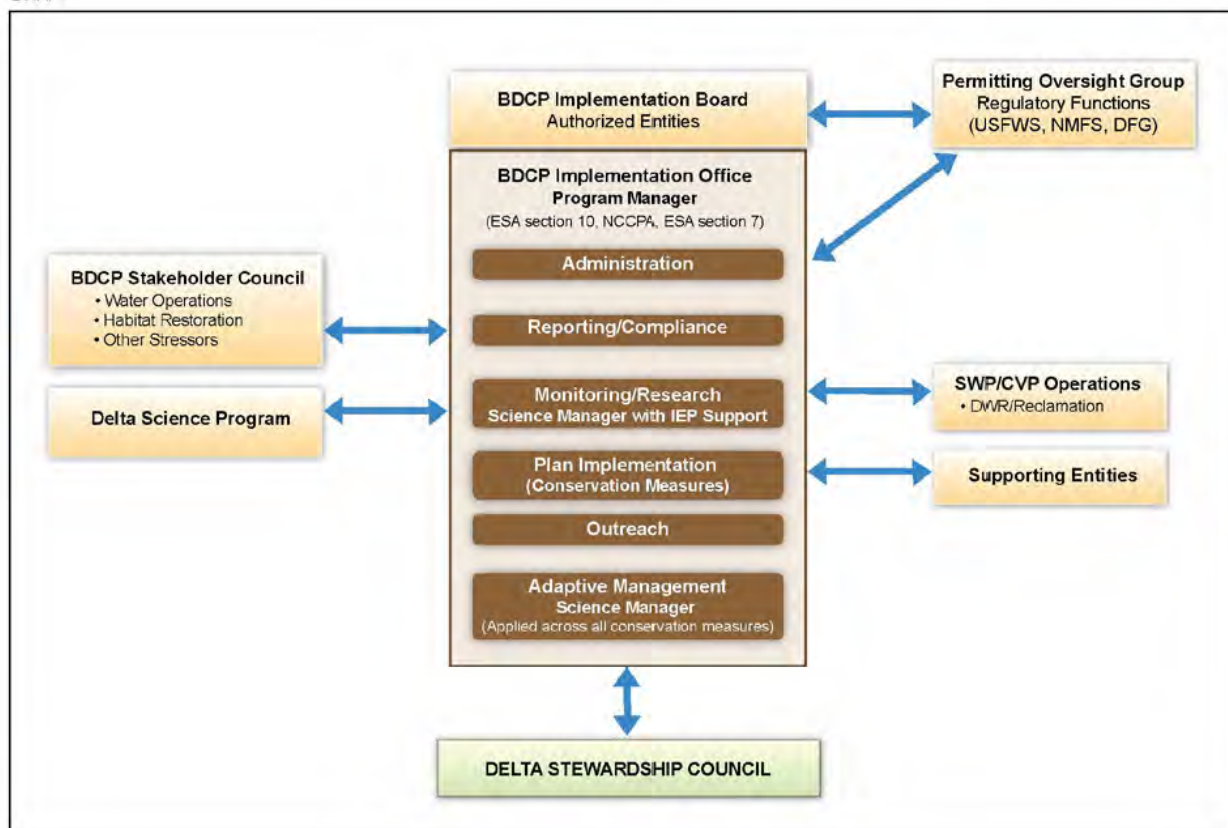
## Appendix B: BDCP Aquatic Habitat Restoration<sup>2</sup>



<sup>2</sup> Ibid, 11.



### Appendix C: BDCP Implementation Structure<sup>3</sup>



<sup>3</sup> "Chapter 7 - Implementation Structure," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/Chapter\\_7\\_-\\_Implementation\\_Structure.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Chapter_7_-_Implementation_Structure.sflb.ashx) (accessed April 21, 2012).

Appendix D: Estimated BDCP Implementation Costs in 2009 Dollars<sup>4</sup>

**Table 5. Estimated BDCP Implementation Costs over 50 Years**  
 (Capital and O & M Cost) in Millions of 2009 Dollars<sup>1</sup>  
 (Does not include financing costs)

Cost Category	Low Estimate		High Estimate	
	Total Cost over 50 years	Average Annual Cost	Total Cost over 50 years	Average Annual Cost
<b>Water Conveyance<sup>2</sup></b>				
Capital	\$10,639	\$213	\$12,075	\$241
Operations	\$ 3,372	\$67	\$3,372	\$67
Subtotal	<b>\$14,011</b>	<b>\$280</b>	<b>\$15,447</b>	<b>\$308</b>
<b>Yolo Bypass<sup>3</sup></b>				
Capital	\$433	\$9	\$485	\$10
Operations	\$0	\$0	\$0	\$0
Subtotal	<b>\$433</b>	<b>\$9</b>	<b>\$485</b>	<b>\$10</b>
<b>Habitat Restoration<sup>4</sup></b>				
Capital	\$3,257	\$65	\$3,789	\$76
Operations	\$148	\$3	\$158	\$3
Subtotal	<b>\$3,404</b>	<b>\$68</b>	<b>\$3,947</b>	<b>\$79</b>
<b>Other Stressors<sup>5</sup></b>				
Capital Operations	\$304	\$6	\$304	\$6
Subtotal	\$1,002	\$20	\$1,254	\$25
	<b>\$1,306</b>	<b>\$26</b>	<b>\$1,558</b>	<b>\$31</b>
<b>Program Oversight</b>				
Capital Operations	\$12	\$0.2	\$12	\$0.2
Subtotal	\$221	\$4	\$221	\$4
	<b>\$233</b>	<b>\$5</b>	<b>\$233</b>	<b>\$5</b>
<b>Monitoring and Research<sup>6</sup></b>				
All Costs	\$1,500	\$30	\$3,000	\$60
Subtotal	<b>\$1,500</b>	<b>\$30</b>	<b>\$3,000</b>	<b>\$30</b>
<b>Costs not yet estimated (still under development)</b>				
Methylmercury Management, Contingency Funding to address Changed Circumstances, EIR/EIS Mitigation (non-biological)				
<b>Partial Total Capital and O&amp;M Costs</b>	<b>\$20,887</b>	<b>\$418</b>	<b>\$24,669</b>	<b>\$493</b>

<sup>4</sup> "Issues for Discussion for the Bay-Delta Conservation Plan – Draft," California Natural Resources Agency, [http://resources.ca.gov/docs/Issues\\_for\\_Discussion\\_BDCP\\_9-9-10.pdf](http://resources.ca.gov/docs/Issues_for_Discussion_BDCP_9-9-10.pdf) (accessed April 21, 2012), 40.

# Appendix E: Low and High Cost Estimates of the Peripheral Canal<sup>5</sup>

Cost Estimate by 5-Year Period						
	Cost Period					
	1-5	6-10	11-15	16-20	21-25	26-30
Water Facilities	\$5,400,000,000	\$8,221,200,000	\$0	\$0	\$0	\$0
	\$176,618,794	\$0	\$0	\$0	\$0	\$0
Channel	\$11,570,000	\$11,570,796	\$11,570,000	\$11,570,667	\$11,570,000	\$11,570,000
	\$0	\$0	\$65,570,796	\$65,570,000	\$65,570,000	\$65,570,000
	\$0	\$0	\$23,470,796	\$19,470,000	\$20,000,000	\$20,000,000
Channel Flow	\$0	\$0	\$0	\$0	\$0	\$0
	\$5,966,310,794	\$8,332,700,796	\$237,700,000	\$237,700,667	\$465,700,000	\$469,700,000
	\$5,966,310,794	\$13,962,400,794	\$104,170,000	\$54,135,016,794	\$14,434,016,794	\$15,159,016,794
						\$11,785

<sup>5</sup> "BDCP Appendix 8.A - Implementation Costs Supporting Materials 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Appendix\\_8\\_A\\_-\\_Implementation\\_Costs\\_Supporting\\_Materials\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Appendix_8_A_-_Implementation_Costs_Supporting_Materials_2-29-12.sflb.ashx) (accessed April 21, 2012).

Covered Bird Species										
California Black Rail	California Clapper Rail	California Least Tern	Greater Sandhill Crane	Least Bell's Vireo	Sagean Song Sparrow	Swainson's Hawk	Tricolored Blackbird	Western Gull	Yellow-Billed Cuckoo	
Estimated Funding Relevant to BDCP, by Plan Component (in millions \$) <sup>2</sup>										
Funding Source <sup>3</sup>	Program Administration	Monitoring, Research, Adaptive Management, and Remedial Measures	Water Facilities and Operations (CM1, CM22)	Natural Community Protection and Management (CM3, CM11)	Natural Community Restoration (CM2, CM4-10, CM12)	Other Stressors Conservation (CM13-21)	Total			
								Total	%	
Federal Funding	\$249	\$1,238	\$17,029	\$566	\$3,189	\$1,360	\$23,630	100.0%		
State Funding	\$290	\$1,037	\$16,934	\$608	\$2,886	\$1,391	\$23,146			
Funding-Cost	\$(42)	\$201	\$95	\$(42)	\$303	\$(31)	\$484	2.1%		
Water Exporter Funding	TBD	TBD	\$16,934	\$37	\$272	\$20	\$17,263	73%		
State Funding <sup>6</sup>	\$-	\$-	\$-	\$116	\$1,740	\$1,008	\$2,864	12%		
Federal Funding	\$149	\$1,238	\$95	\$289	\$1,176	\$268	\$3,213	14%		

Chapter 8

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most cases, funding amounts are estimates only based on funding history, overlap with BDCP goals, and assessment of competitiveness of BDCP projects. Funding estimates from state and federal agencies do not represent commitments and are subject to annual appropriations from the Legislature and Congress, respectively. Where a range is provided in the text, the midpoint of the range is used for this table. Where funding sources apply to multiple Plan components, funding is allocated proportional to cost across applicable components, unless there is a basis to allocate funds differently. Allocations are estimates of potential funding and do not imply dedicated or guaranteed funding.

See Table 8-56 for details on Bay-Delta Fund funding. Funding may be provided from this source but it is not assumed due to the uncertainty in funding to support BDCP. Funding may be provided from this source but it is not assumed due to the uncertainty in funding to support BDCP.

will have adverse effects to species  
will have both beneficial and adverse effects to species  
is not applicable to species

## Appendix F: Expected Source

## Appendix G: Table o

## Appendix H: Expected Costs

<sup>6</sup> "BDCP Chapter 8 - Implementation Costs and Funding Sources 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_8\\_-\\_Implementation\\_Costs\\_and\\_Funding\\_Sources\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_8_-_Implementation_Costs_and_Funding_Sources_2-29-12.sflb.ashx) (accessed April 21, 2012).

<sup>7</sup> "BDCP Chapter 5 - Effects Analysis 2-29-12," The Bay-Delta Conservation Plan, [http://baydeltaconservationplan.com/Libraries/Dynamic\\_Document\\_Library/BDCP\\_Chapter\\_5\\_-\\_Effects\\_Analysis\\_2-29-12.sflb.ashx](http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/BDCP_Chapter_5_-_Effects_Analysis_2-29-12.sflb.ashx) (accessed April 21, 2012).

<sup>8</sup> "Cost Estimate - H.R. 1837: Sacramento-San Joaquin Valley Water Reliability Act," Congressional Budget Office, <http://www.cbo.gov/sites/default/files/cbofiles/attachments/hr1837.pdf> (accessed April 22, 2012).

	By Fiscal Year, in Millions of Dollars											2013-	2013-
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2017	2022	
CHANGES IN SPENDING SUBJECT TO APPROPRIATION													
Title II – San Joaquin River Restoration													
Estimated Authorization Level	0	-50	-50	-50	-50	-50	-50	0	0	0	-200	-300	
Estimated Outlays	0	-40	-50	-50	-50	-50	-50	-10	0	0	-190	-300	
CHANGES IN DIRECT SPENDING													
Title III - Early Repayment of Capital Debt													
Estimated Budget Authority	-232	-24	-24	-24	10	10	10	10	10	10	-294	-244	
Estimated Outlays	-232	-24	-24	-24	10	10	10	10	10	10	-294	-244	
Title I – Central Valley Project Reliability Act													
Estimated Budget Authority	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-5	-10	
Estimated Outlays	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-5	-10	
Total Changes													
Estimated Budget Authority	-233	-25	-25	-25	9	9	9	9	9	9	-299	-254	
Estimated Outlays	-233	-25	-25	-25	9	9	9	9	9	9	-299	-254	
CHANGES IN REVENUES													
Estimated Revenues <sup>a</sup>	*	-2	-3	-3	-4	-4	-4	-4	-4	-4	-13	-33	
NET INCREASE OR DECREASE (-) IN THE DEFICIT FROM CHANGES IN DIRECT SPENDING AND REVENUES													
Change in Deficit	-233	-23	-22	-22	13	13	13	13	13	13	-286	-221	

Notes: Components may not sum to totals because of rounding; \* = revenue loss of less than \$500,000.

a. For revenues, negative numbers indicate an increase in the deficit. Estimate prepared by staff of the Joint Committee on Taxation.

## Appendix I: Graph Demonstrating Decline of Salmon Population on the West Coast<sup>9</sup>

<sup>9</sup> "A General Review of Potential Effects of H.R. 1837, The Sacramento-San Joaquin Valley Water Reliability Act, on Central Valley Salmon Productivity And Salmon Fisheries in Ocean and Inland Waters," Pacific Fishery Management Council, [http://www.pcouncil.org/wp-content/uploads/H2a\\_ATT7\\_DRAFT\\_PPMC\\_SRFC\\_APR2012BB.pdf](http://www.pcouncil.org/wp-content/uploads/H2a_ATT7_DRAFT_PPMC_SRFC_APR2012BB.pdf) (accessed April 22, 2012).

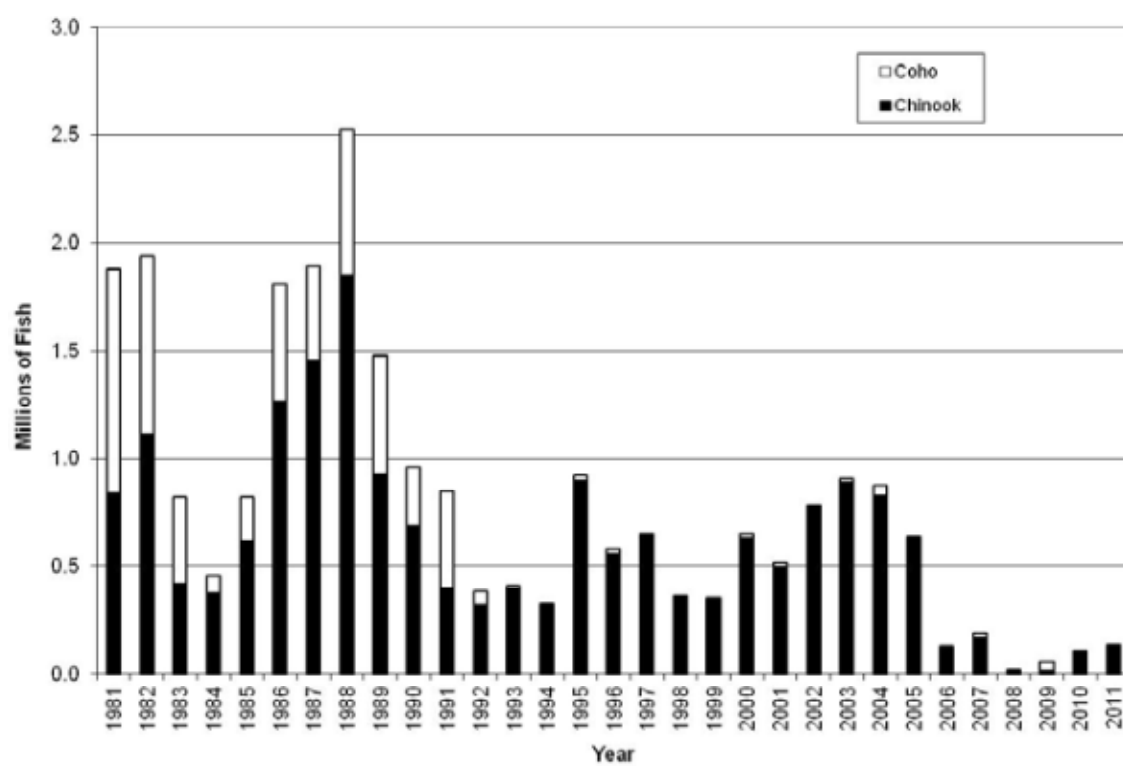


Figure 1. West Coast ocean non-Indian commercial Chinook and Coho harvest.