



April 26, 2011

Erin Foresman  
U.S. Environmental Protection Agency  
75 Hawthorne Street, WTR-3  
San Francisco, California 94105  
(submit via Federal Rulemaking Portal, [www.regulations.gov](http://www.regulations.gov). Identification Docket Number EPA-R09-OW-2010-0976)

**Subject:** Advanced Notice of Proposed Rulemaking for Water Quality Issues in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.

Ms. Foresman,

Please find attached the Department of Fish and Game (DFG) and Department of Water Resources (DWR) comments on the February 10, 2011, Advanced Notice of Proposed Rulemaking for the Bay-Delta Estuary (ANPR). These state agencies appreciate the important, collaborative role the Environmental Protection Agency (EPA) continues to play with the State and other federal agencies in developing management solutions to the water quality issues that aquatic resources continue to face in the estuary. The original coordination of federal agencies with the creation of the Federal Ecosystem Directorate in the spring of 1994, followed in August of that year by the federal-state Framework Agreement, established the cooperative approach which is vital to effectively addressing these difficult issues. The creation of the Federal Bay-Delta Leadership Committee, the Federal Action Plan, and the assessment of current actions beginning with this ANPR continue this important federal-state cooperation.

While the state agencies have each provided focused comments in response to the Notice, the ANPR itself identifies the principal sources of information on the questions it poses: the findings and reports of the Interagency Ecological Program Pelagic Organism Decline science team, the Bay Delta Conservation Plan process, the Delta Vision Blue Ribbon Task Force, and the Delta Stewardship Council. Much of this information has evolved from and built upon that produced through the CALFED program and the management programs launched in the 2000 CALFED Record of Decision, such as the Environmental Water Account, the Ecosystem Restoration Program, and the Multi Species Conservation Strategy. The ANPR properly recognizes the additional information that has been produced in connection with the issuance of biological assessments and biological opinions under the Endangered Species Act.

1416 Ninth Street, Suite 1311, Sacramento, CA 95814 Ph. 916.653.5656 Fax 916.653.8102 <http://resources.ca.gov>

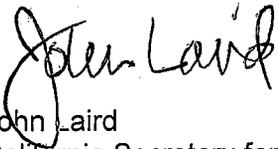


Erin Foresman  
April 26, 2011  
Page 2

The ANPR also identifies the specific roles of the State Water Resources and Regional Water Quality Control Boards, as well as EPA under the Clean Water Act. The interest and jurisdiction of these agencies is the area where new research and efforts would be most helpful in developing information on water quality factors affecting aquatic resources in the Bay-Delta ecosystem. The ANPR rightly asserts that contaminants are of high concern, and we believe are uniquely suited to investigation by the EPA and state water quality agencies. Additionally, the ANPR also affirms that all stressors on Bay-Delta biological systems, not just water quality, must be considered in an integrated and synthetic fashion, including water diversions, flow regimen, and exotic species, which all involve the expertise and authority principally of other agencies. As we move forward to address the challenges in the Delta, it is important to recognize that the Delta and its tributaries are parts of an inextricably linked system. This linkage is important to consider when evaluating contaminants and identifying sources in development of regulatory actions.

As important as the continued assistance of EPA will be in these investigations, its continuing participation in coordinated management efforts of state and federal agencies in the Bay-Delta Estuary is at least as important. The State appreciates greatly the EPA's renewed commitment to this collaborative management effort that the ANPR expresses.

Sincerely,

A handwritten signature in black ink, appearing to read "John Laird". The signature is written in a cursive, flowing style with a large initial "J".

John Laird  
California Secretary for Natural Resources

**Department of Water Resources**  
**Comments on the U.S. EPA Advanced Notice of Proposed Rulemaking**  
**And Possible Actions to Address Water Quality**  
**Conditions Affecting Aquatic Resources in the San Francisco Bay/  
Sacramento-San Joaquin Delta Estuary in California**<sup>1</sup>

April 15, 2011

## **Introduction**

The California Department of Water Resources (DWR) appreciates the opportunity to provide comments on the Advanced Notice of Proposed Rulemaking (ANPR). The U.S. Environmental Protection Agency (USEPA) ANPR demonstrates a vigorous effort to capture the current and past state of knowledge of the effects of contaminants on the San Francisco Bay/ Sacramento-San Joaquin Delta Estuary (Delta) ecosystem. Some of the referenced material contains various levels of peer reviewed science, as well as dated material. This is largely an artifact of the dearth of comprehensive scientific research conducted historically on aquatic impacts in the estuary. Research occurring over the last ten years, and specifically during the POD investigations period represent a more accurate assessment of the current state of the role contaminants are playing when discussing the effects on the aquatic resources and the recent decline.

Historically the Delta has been weakly covered in terms of contaminants research and the overall effects on aquatic life. This is largely due to agency missions and mandates not covering contaminants as a specific group of stressors within the Delta. The Interagency Program has historically focused on effects of the water projects on the ecosystem. Long term water quality monitoring has been conducted over the last 40 years, but the parameters have been basic water quality parameters, not contaminant focused. Likewise the State Water and Regional Water Resources Control Boards have traditionally regulated discharges on a point source basis in the watersheds and the Delta, but point source discharge is only a one part of the contaminant loading to the Delta.

The Delta is unique in that there is existing agriculture that provides a source of pesticides and nutrients, but is also a catchment basin for the huge watershed basins of the Sacramento and the San Joaquin. These basins provide a mixture of both urban and agricultural point and non-point sources. Urban growth in close proximity to the Delta and its watersheds is the single most significant factor in the increase in a variety of contaminants of concern such as urban pesticides, metals, nutrients, bacteria, and emerging contaminants of concern. The complex hydrodynamics of the Delta and the transitory nature of the fish and other organisms make translation of contaminant presence difficult to link to population level effects.

---

<sup>1</sup> Prepared by Rich Breuer, Chief, Environmental Water Quality Estuarine Studies Program

## **Regulatory Actions and Challenges**

The Clean Water Act and Porter Cologne act enforcement through federal and State efforts have brought significant reductions of contaminants of concern. The majority of control efforts are still point source focused in terms of loading and toxicity.

An example of regulatory challenges is the lengthy regulatory process. As noted in the ANPR the Central Valley Regional Water Quality Control Board has recently issued a new NPDES permit to Sacramento regional POTW. Unfortunately the time frame for compliance is ten years. If ammonium inhibition is occurring and is a factor in the declining food web, the system cannot wait ten years. Interim measures are available and should be required.

Another example is TMDLs. The TMDL for Diazinon was a significant, successful action that resulted in a reduction of Organophosphate pesticides. The actual process of establishing and creating the TMDL was lengthy and resulted in the industry shifting away from Organophosphates to Pyrethroids which now raises serious concerns about the aquatic impacts of Pyrethroids. Regulatory actions that result in a major change in pesticide use needs to be evaluated in terms of alternatives impacts during the regulatory process.

The introduction of the Ag Waiver program has brought an effective and reasonable non-point source approach to pesticide monitoring. Integration of the resulting data with an overall systems approach to spatial and temporal loading should be conducted. There is a lack of connectivity between the monitoring program as regulated by the SWRCB, and federal, state, and university researchers studying toxicity and population level effects.

As mentioned previously, urban growth continues to be the largest changing land use contributing pesticides. Market protection laws keep important sales and use data of urban pesticides out of reach of researchers. USEPA should develop a process to provide regional urban pesticide use data without violating retailers' rights to keep sales information private. Additional studies on loading and toxicity of urban contaminants are needed.

### **Integration of contaminant monitoring with targeted species**

There is a great need to create an integration of the monitoring and effects analyses efforts. The temporal and spatial distribution of contaminants needs to be linked to the temporal and spatial distribution of biota of concern. This includes phytoplankton all the way up to higher trophic levels.

The current Bay Delta Science funded pesticide modeling project ; the Spatial and Temporal Quantification of Pesticide Loadings to the Sacramento River, San Joaquin River, and Bay Delta to guide Risk Assessment for Sensitive Species is an example of this type of integrated analyses. The development of the USEPA funded PRISM model is a basis for this effort. This is a joint project between DWR, USEPA, UC Davis, and

CDPR, with involvement from federal, State and private in kind donations of time on technical advisory groups. It has produced a baseline engine to look at pesticide applications at the field and urban level and generate the temporal and spatial hotspots for toxicity to sensitive species of concern. This process also includes the lifecycle modeling of the species. Though the model is not a turnkey product, the model will allow focused questions about where we should be looking for effects. Additional funding is needed to include a flow transport component to the model.

This modeling effort will help provide a mechanism to maximize efficiency for toxicity work, since it provides a temporal and spatial direction for monitoring efforts for species of concern. Another use of the model will be to guide actual field data collection. The establishment an implementation of BMPS could then be prioritized and implemented to achieve the best reduction of transport from the field to the waterways.

With funding ending in June 2011, the effort to refine this model will require both funding and continued integration with researchers and agencies to provide realistic parameters to the model.

### **In situ and sub lethal toxicity work**

Recent studies for the Pelagic Organism Decline have shown a low percentage of evidence of direct toxicity to fish in the major Delta waterways. This requires a more complex investigation of synergistic effects in combination with other stressors, or sublethal effects of reduced vigor.

The traditional type of research efforts for toxicity often involve a point source approach to sampling which relies on the premise of a constant proportion of concentrations. Grab sample efforts for toxicity testing may not represent a true snapshot of the contaminants because the rivers and the Delta are a mixing point receiving changing types and proportions of contaminants. This could result in seeing a population effect to a species, without confirmation or linkage to the monitoring or toxicity work. Using a model as described above would assist in creating a more focused monitoring plan for new work.

Recently, the use of in situ placement of species in a flow through enclosure has been used. This maximizes the exposure to pulses and more closely represents the type of exposure that the natural system is experiencing. Because of limited evidence of a smoking gun by acute effects, chronic and sub lethal effects need to be evaluated. Studies of the movement and physical behavior effects from sub lethal mixtures found in the system needs to be funded and connected with biomarker research. A biomarker current study by USEPA ORD has focused on in-situ exposure of fathead minnows on the Sacramento and San Joaquin River. DWR has provided field staff and facilities for the project.

## **Specific Contaminants**

### **Ammonia**

The ANPR has captured many of the current studies with ammonia inhibition. As stated above, the time frame for the permit-required ammonium reduction the Sacramento Regional POTW is too long and will not protect the Delta in the interim. Continued work on actual ammonium levels coupled with in-situ studies should be funded to further understand the mechanisms and effects to the food chain.

The Delta has seen an increase of the toxic blue-green algae, *Microcystis*. Blue green algae have been shown to better utilize ammonia initially. Also their nitrogen source studies need to be conducted that examine the role the increase in ammonia has had on the shift of algal speciation in the Delta.

### **Selenium**

Of all the contaminants of concern we rate selenium the lowest of the provided list. Based on the aquatic species of concern, selenium at environmental levels in the Delta has not emerged in our current POD aquatic toxicity studies the last 7 years. Though the other specific contaminants listed are consistent with the current state of concern, the addition of selenium in the ANPR seems more focused on the San Joaquin River as impaired, and possible impacts to sturgeon, as opposed to any true evidence of existing effects to other species in the Delta. The dilution flows of the Delta and the transitory nature of sturgeon (mentioned as species of concern in the ANPR) make this a difficult contaminant to link to population level effects of sturgeon. Based on the other contaminants of concern that have shown a higher propensity for effects to a greater number of species, selenium should receive a low ranking for funding priorities. However, selenium should continue to be regulated and if funding is available beyond the higher priority contaminant issues, then additional research should be conducted for sturgeon. Actual sturgeon movement and migration needs to be suited alongside toxicity work to determine routes of exposure.

### **Pesticides**

As discussed above tools like the pesticide transport model, biomarkers, and in situ exposures need to be used to better link contaminants with toxicity studies and population level effects. Pyrethroids continue to be major contaminant of concern. Urban loading of pesticides and nutrients, especially Pyrethroids, continue to grow as urban areas adjacent the Delta and in the watersheds increase in size. The restriction of sales data on urban pesticides is a major roadblock to full understanding the use, loading, and transport of urban pesticides. Development of urban loading assessments and effects need to be funded, with Pyrethroids continuing to be of major concern. The Ag Waiver program needs to be better coordinated and data provided in a consistent format through the SWAMP program.

## **Mercury**

Mercury is currently being regulated under the TMDL action. The risk issue with mercury is human based. The TMDL regulation itself requires restoration projects to conduct effects studies that may be unrealistic and difficult to execute. The loss of functional tidal systems, and seasonal and permanent wetlands is well documented. The possible risk to a modeled small subset of human consumers, vs. the need to reestablish functional habitats for aquatic species needs to be incorporated into the analyses and future revisions to the TMDL. The greatest potential for restoration success lies within the Yolo bypass and northwest Delta where existing and non expanding loads of elemental mercury are found, therefore it is inevitable that this issue of methylation of mercury from wetlands will be critical.

## **Heavy Metals/Long Residual Discontinued Contaminants**

Some literature references in the ANPR focus on heavy metals and long residual contaminants (PCB's DDT, etc). These contaminants are often studied by researchers due to their ability to be found year after year through monitoring programs in the environment and study organisms. Despite their presence in the environment and in the aquatic food chain, levels have been stable and dropping. Fish populations have been higher in the past when these contaminants were at higher levels. Most of these compounds are already heavily regulated or not in use. This does not discount the concern, but in terms of prioritization, the other contaminants with more unknowns are of a higher concern.

## **Temperature**

A number of fish species are at risk if temperatures climb in the future. Already we see temperatures that can be border line for Delta smelt and salmonids at certain times of the year. Loss of shaded riverine habitat has contributed to this problem. Thermal pollution is also of a concern. Recent, unpublished data is showing radio tagged striped bass congregating in the region of the diffuser. A new study commissioned by the Sacramento Regional POTW should provide additional information regarding fish migration and behavior near this discharge.

## **Emerging Contaminants of Concern**

As mentioned above the increase in urban areas and population has brought an increase in contaminant loading, including pesticides, metals, nutrients, pharmaceuticals, and personal care products (PPCP's). Growing concern over PPCP's will require the development of specific studies and new techniques. Ammonia toxicity studies with Delta smelt at the UCD Aquatic Toxicity Labs showed "unknown" contaminants in the Sacramento Regional POTW effluent increased the toxicity over ammonia (NH<sub>4</sub>Cl) alone. As recommended above in situ exposure of organisms provides a more realistic chronic exposure study. Since most PPCP's are in trace

amounts long term exposure using in situ techniques allows the organism to receive enough dose to look for a response.

Biomarker techniques are widely used, but there is often little consensus amongst researchers on a consistent technique. The very nature of university proprietary research tends to support new methodology development over refinement and support of another researcher's technique. The development of consistent biomarkers for PPCP exposure, linked to gene or physiological expression will provide a link between exposure and population effect.

### **Fish Migration and Turbidity**

Turbidity has traditionally been viewed as a negative water quality parameter. For Drinking water treatment turbidity and suspended solids interfere with the disinfection process and creates sediment loads and disposal challenges in treatment plants. The Delta has become increasingly clear. The large amounts of sediment that initially entered the Delta from hydraulic mining has largely been transported out of the system. Large amounts of aggregate and sediment containing mercury still exist, trapped in the upper watersheds. The urbanization of the watersheds, the dams, the ever increasing levee systems, and the loss of overland flow and flooding has created a system that no longer sees large amounts of particulate organic matter and suspended solids moving through the Delta.

Not surprisingly fish have evolved in the Delta and adapted to historical conditions. In the case of delta smelt migratory cues are linked to turbidity, either as a surrogate of runoff constituents, or the actual suspended material itself. Additionally Smelt larvae and juveniles raised in UCD's fish facility in Byron required turbidity for survival. In toxicity tests conducted by the UCD Aquatic Toxicology Laboratory, using Delta smelt, turbidity increased control group survival. The actual mechanisms are not known, only that suspended material is critical to their survival.

Recent otolith work has shown that the simple traditional model of a single population survival strategy is incorrect. Living in Suisun bay, migrating up stream, spawning, and returning downstream is part of their population survival strategy, but the research has shown other distinct populations that follow a different pattern. There is a resident population of Delta smelt in the northwest Delta in the Cache slough complex and deep water ship channel. It is these areas, like the bypass, that functionally resemble the historic delta, with sloughs, wind resuspension of turbidity, and over land flow and runoff of particulate organic matter and suspended material. Any future success with Delta smelt will require a similar matrix for spawning cues and survival.

### **Fish Passage and the Yolo Bypass**

The Northwest Delta starting in the west at Suisun marsh and moving north through Lindsay and Cache slough, and north through the Yolo bypass, represents both hydro-

dynamically and topographically the most conducive areas to preserve and/or restore tidal wetlands.

Historically, seasonal flooding would inundate the central valley, providing flooded habitat for fish to utilize, and after draining, transport of sediment and suspended organic matter and nutrients essential for the aquatic ecosystem. We have lost that functionality and only during certain years do we get seasonal flooding in the bypass. Research and expert opinion shows that seasonal flooding of part of the bypass, with improved fish passage over the Fremont weir would be extremely beneficial. Plans have been prepared that would preserve other functions in the bypass and still allow seasonal flooding and continuous fish passage. Cache slough and Suisun bay would see more nutrients and suspended matter, creating a more productive ecosystem.

The bypass needs to be altered to provide a controlled annual flooding and fish passage regardless of water year type. If climate change brings more rain and less snow, the bypass system will be inundated more frequently and a designed system would prevent more disruption of warm season land uses.

## **Summary**

DWR applauds USEPA for enforcement of the Clean Water Act and FIFRA. Monitoring and research of contaminants work in the Delta needs to be prioritized and funded. Urban growth adjacent to the Delta and water shed continues to contribute increasing amounts of contaminants, and these impacts need to be studied. Pesticides and contaminants are not clearly the smoking gun, but are additive to the problem. Pesticide modeling should be used to target specific chemicals of concern, and where and when we should be evaluating them in the system. Enforcement of the mercury TMDL study requirements needs to be realistic and tempered based on the objectives of restoring sensitive species. Research that provides chronic exposure and evaluates chronic health for the biotic populations is needed. DWR is willing to provide in situ platforms on the Sacramento and San Joaquin rivers for exposure work.

**Department of Fish and Game**  
**Comments on the U.S. EPA Advanced Notice of Proposed Rulemaking**  
**Water Quality Challenges in the San Francisco Bay/Sacramento-San**  
**Joaquin Delta Estuary**

**General**

Late in 2010 the Department of Fish and Game (DFG) submitted a report to the California Fish and Game Commission on stressors impacting the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Delta)<sup>1</sup>. The report lists the most important stressors thought to affect important species and ecological processes in the Delta system and describes known and potential effects, potential actions to correct the impacts, and the responsible parties to take the actions. Many of the stressors identified in the Advanced Notice of Proposed Rulemaking (ANPR) can be found in this report under one of the three priority groups listed. Priority 1 stressors have the greatest potential impacts and affect all aquatic resources. Priority 2 stressors are thought to be less pervasive and have more species specific impacts, and Priority 3 stressors are thought to be more localized to smaller geographic areas or affect only certain species or a few species. DFG suggests reviewing the report for more information on the current understandings of contaminants and stressors causing adverse impacts to the aquatic resource designated uses in the Delta.

Flow is an important component in protecting ecological services within the Delta and affects each of the issues identified in the ANPR. As such, flow standards play a large role in determining baseline conditions and help to understand and effectively manage and regulate contaminants. The importance of flow and its role in ameliorating or exacerbating water quality/ecosystem problems necessitates that a decision on flows be made in both major tributaries to the Delta – the Sacramento and San Joaquin rivers. At present, DFG is working collaboratively with the State Water Resources Control Board to evaluate and set new flow standards in the San Joaquin River and will continue to participate in these types of processes (e.g., triennial review, water rights proceedings, etc.)

**Contaminants**

DFG would like to thank the EPA for its reconsideration and inclusion of temperature to the listed segments of the San Joaquin River and its tributaries in the 2010 Integrated Report (CWA 303(d) list/305(b)). The EPA currently has two water temperature impairment reports completed by DFG. The titles of these reports are:

---

<sup>1</sup> <http://www.dfg.ca.gov/delta/reports/Delta-Organisms-Stressors-Report-20100728.pdf>

- *Public Solicitation of Water Quality Data and Information for 2008 Integrated Report – List of Impaired Waters and Surface Water Quality Assessment [303(d)/305(b)]: Temperature Water Quality Standards for the Protection of Anadromous Fish in the Merced River, Stanislaus River, Tuolumne River and the San Joaquin River* completed in February 2007.
- *Notice of Public Solicitation of Water Quality Data and Information for 2012 California Integrated Report - Surface Water Quality Assessment and List of Impaired Waters [Clean Water Act Sections 305(b) and 303(d)]: Water Temperature Quality Standards for the Protection of Anadromous Fish in the Merced River, Stanislaus River, Tuolumne River and the San Joaquin River Update 2010* completed in August 2010.

The efforts undertaken to develop the information and data set used for that listing is a great example of the cooperation needed to protect the Delta and its resources and demonstrates the importance of connectivity between the Delta and its tributaries.

In reviewing the ANPR list of contaminants, DFG suggests continued and further review in the areas of flow, nutrient loading, blue-green algal toxins, water temperatures, DO, sediment loading, mercury and other heavy metals, and other trace elements. Increasing flows in the Delta tributaries will have multiple beneficial effects, including improvements in water temperature and dissolved oxygen conditions for migrating anadromous fish and improving reproductive success and recruitment. By continuing to address nutrient loading we can decrease blue-green algal blooms, which will eliminate algal toxin production. Continued pesticide, heavy metal and trace element management will improve food chain production and improve reproductive success of aquatic invertebrates, fish, and wildlife that inhabit and feed in the Delta region. DFG is appreciative that the EPA is engaged in these areas and encourages support that will assist in the continued review and monitoring in these areas.

To better understand contaminants within the Delta and to determine baseline conditions, continued efforts to develop a comprehensive Regional Monitoring Program are critical. DFG appreciates EPA's efforts so far and feels that inclusion of our monitoring programs (e.g., Fall Midwater Trawl, Spring Kodiak Trawl, Smelt Larva Survey, Fish Salvage Monitoring, Bioassessment Program) will be essential in developing a truly comprehensive monitoring program and help ensure contaminant effects are being evaluated toward the protection of public trust resources.

In evaluating the role that climate change may have on contaminants, DFG suggests reviewing the 2009 *California Climate Change Adaptation Strategy*<sup>2</sup>. In particular, the Biodiversity Chapter (Chapter V, pg. 45) contains information about the effects of climate change on streams, fisheries, and habitat. The report

<sup>2</sup> <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

also discusses cross-sector impacts, such as mosquito abatement for public health and the biological affects to fish, migratory birds, and food chain, as well as threats from contamination/pollution expected from flooding of farms and infrastructure. It is thought that higher temperatures together with flooding will likely increase algae blooms which can lead to more wildlife diseases (e.g., avian botulism) and affect dissolved oxygen and fish survival. There may also be a greater prevalence of West-Nile virus and avian influenza. Public health response to these threats may involve wide spread application of insecticides or other increased use of contaminants that could then affect fish and wildlife.

### **Protecting Estuarine Habitat, Fish Migratory Corridors, and Wetlands**

DFG has dedicated much of its efforts to develop information to understand and protect Delta estuarine habitats, fish migratory corridors, and wetlands. That information and the answers to many of the questions proposed in the ANPR can be found through the following projects and reports.

Relationships and recommendations regarding fish migratory corridors and the low salinity zone (X2) can be found in DFG's 2010 report on *Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta*<sup>3</sup>. The report contains information relating to Delta species life history and flow and habitat requirements; season and time periods of flow importance; flow relationships with species abundance and habitat, invasive species, and survival; species environmental requirements; and factors influencing population trends and limiting population abundance.

One of the main goals of the San Joaquin River Restoration Program is the reestablishment of Spring and Fall Run Chinook salmon below Millerton Dam. This goal is dependant on the ability of anadromous fish to use the San Joaquin River as a migratory corridor. DFG has been an active participant in the San Joaquin River Restoration Program and contributor to many of the Program's reports and documents that may be of use to you in understanding the current science behind the San Joaquin River as a migratory corridor. Specifically the *Draft Fisheries Implementation Plan, A Framework for Adaptive Management in the San Joaquin River Restoration Program, June 2009*<sup>4</sup>.

Substantial progress has been made in the restoration and management of the State's wetlands. Many of the challenges facing our wetlands, including the Delta, along with recommendations to address those challenges, can be found in *California's 2010 State of the State's Wetlands Report*<sup>5</sup>.

Additional information regarding X2 and the importance of the Suisun Marsh and the establishment of enhanced tidal marsh habitat can be found in the *Draft*

<sup>3</sup> <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=25987>

<sup>4</sup> [http://www.restoresjr.net/program\\_library/03-Tech\\_Memoranda/FMPwExhibits06052009.pdf](http://www.restoresjr.net/program_library/03-Tech_Memoranda/FMPwExhibits06052009.pdf)

<sup>5</sup> [http://www.californiawetlands.net/static/documents/Final\\_SOSW\\_Report\\_09232010.pdf](http://www.californiawetlands.net/static/documents/Final_SOSW_Report_09232010.pdf)

*Suisun Marsh Habitat Management, Preservation, and Restoration Plan EIS/EIR*<sup>6</sup>. The plan is intended to balance the benefits of tidal wetland restoration with other habitat uses in the marsh by evaluating alternatives that provide a politically acceptable change in marshwide land uses, such as salt marsh harvest mouse habitat, managed wetlands, public use, and upland habitat.

DFG would like to thank you for the opportunity to comment on the ANPR and feels that continued communication, cooperation, and collaboration among state and federal agencies is key in managing our natural resources. We look forward to continuing our efforts to improve water quality monitoring, model and monitoring method development, the development of TMDLs, and future changes to regulations, rules, guidance and statutes. Should you have questions regarding the information we have provided, please contact Scott Cantrell, acting Water Branch Chief, at (916) 445-1272 or [scantrel@dfg.ca.gov](mailto:scantrel@dfg.ca.gov).

---

<sup>6</sup> [http://www.usbr.gov/mp/nepa/nepa\\_projdetails.cfm?Project\\_ID=781](http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=781)