

## Lead Scientist's Report

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Summary: This report covers six items: 1) highlights of the Fish Predation Workshop report, 2) the 11<sup>th</sup> Biennial State of the San Francisco Estuary Conference, 3) the 2013 Long-term Operations Biological Opinions Annual Science Review, 4) the Delta Science Program Workshop on Delta Outflows and other Non-Flow Related Factors, 5) the formal launch of the Delta Regional Monitoring Program by the Central Valley Regional Water Quality Control Board, and 6) a summary of current numbers relevant to Delta water and environmental management.

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### **Fish Predation Workshop Panel Report**

On October 1, 2013 the panel report was released from the Delta Science Program (DSP), Department of Fish and Wildlife, and National Marine Fisheries Service (NMFS) sponsored Fish Predation Workshop that was held July 22-23, 2013. The workshop was held to update the state of knowledge on the relative importance of predation among other factors that stand in the way of salmonid species recovery efforts (Delta Plan Recommendations ER R2 and ER R7), and to identify a framework for research to support future management decisions. The panel found existing data and analyses inconclusive with respect to rates and population-level effects of fish predation on salmonids. They pointed out that the effects of predator control measures are uncertain, and found that neither predator control nor habitat restoration alone is likely to be effective in recovering salmonid populations. The panel emphasized the difficulty of distinguishing immediate causes of mortality from the ultimate causes. For example, a juvenile salmonid may be consumed by a predator fish (the immediate cause of mortality) due to poor physiological condition or overwhelming predation pressure, lack of cover to avoid predators, or some combination of these and other factors (ultimate causes). Finally, the panel recommended 1) specific improvements in data management and sharing for fish predation research conducted in the Delta, 2) standardization of research methods, and 3) a series of research topics that must be addressed to reach scientifically valid conclusions regarding the role of fish predation on salmonid populations.

### **11<sup>th</sup> Biennial State of the San Francisco Estuary Conference**

The 11<sup>th</sup> Biennial State of the San Francisco Estuary Conference will be held October 29-30, 2013. This year's theme is "20/20 Vision: Past Reflections, Future Directions" with panels, presentations, and discussions centered around climate change and sea level rise. Delta inflows and outflows, contaminants of emerging concern, invasive species, and other threats to fish and wildlife populations. Presenters will also examine the ways in which government and decision-makers can better engage Bay-Delta communities in critical decision-making around these challenges. This will include a panel on "One Estuary, Many Plans: How Will They Work Together?" consisting of

leadership from the Delta Stewardship Council (Randy Fiorini), State Water Resources Control Board (Felicia Marcus), Department of Water Resources (Mark Cowin), the Delta Protection Commission (Michael Machado) and Department of Fish and Wildlife (Charlton Bonham). In addition, the Delta Science Program will present a session on “The Delta Science Plan – Working Together to Build an Open Science Community” which will include an introduction by Delta Lead Scientist Peter Goodwin and a panel discussion moderated by Deputy Executive Officer for Science Rainer Hoenicke and feature scientists and agency managers working in the Delta.

### **2013 Long-term Operations Biological Opinions Annual Science Review**

The 2013 Long-term Operations Biological Opinions (BiOp) Annual Science Review will be held November 6-7, 2013. The intent of the annual review is to inform NMFS and U.S. Fish and Wildlife Service as to the efficacy of the prior year’s water operations and regulatory actions prescribed by their respective Reasonable and Prudent Alternatives (RPAs), with the goal of developing lessons learned, incorporating new science, and making appropriate, scientifically justified adjustments to the RPAs or their implementation to support future water years real-time decision making.

The DSP is conducting this review for the fourth consecutive year. This year’s review will focus on: 1) Shasta operations in water year 2013, including temperature management opportunities and constraints; 2) proposed modifications to Term and Condition 2a of the NMFS Long-term Operations BiOp, which requires the U.S. Bureau of Reclamation to develop an alternative technique to quantify the incidental take of listed anadromous salmonid species and green sturgeon at the federal and State export facilities; and 3) a retrospective analysis of water operations and delta smelt protective actions in water year 2013.

### **DSP Workshop on Delta Outflow and Other Non-Flow Related Factors**

The DSP Workshop on Delta Outflow and Other Non-Flow Related Factors, which was to take place on November 12-14, 2013, needed to be postponed due to the federal government shutdown. New target dates will be arranged with panelists, speakers, and the planning group. This will be the first of two workshops requested by the State Water Resources Control Board on outflow and interior flow of the Delta to provide the best available science to inform Phase 2 of the 2006 Water Quality Control Plan for the San Francisco/ Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) to protect beneficial uses of water in the Bay-Delta. A third workshop on the effects of nutrient enrichment may be held sometime in 2014 if requested by the State Water Board.

### **Launch of the Delta Regional Monitoring Program**

In accordance with the Delta Plan’s Recommendation WQ R9 of the Delta Plan, the Central Valley Regional Water Quality Control Board formally launched the Delta Regional Monitoring Program and adopted a Resolution at its October 4 meeting to provide for participation in the program in lieu of individual monitoring efforts.

[http://www.waterboards.ca.gov/centralvalley/board\\_decisions/tentative\\_orders/1310/23\\_delta\\_rmp/2\\_delta\\_rmp\\_res.pdf](http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1310/23_delta_rmp/2_delta_rmp_res.pdf)

The Water Boards have made it a priority to develop a Regional Monitoring Program (RMP) for the Delta that not only coordinates monitoring and assessment efforts in and around the Delta, but also regularly gathers, compiles, assesses, and reports data in support of the program. The Delta RMP, like all other regional monitoring efforts, will evolve over time, expanding the scope of issues being studied and the breadth of stakeholder involvement.

The Delta RMP has completed its organizational phase – governance structures are in place, there is an active steering committee, technical committee co-chairs have been appointed, and efforts are in process to select the first projects for the RMP. The proposed resolution begins to address a critical aspect of future phases – how the RMP will be funded. The DSP will track and participate in the design of future phases intended to include monitoring elements to adaptively manage stressor reduction and habitat restoration to meet aquatic life uses.

### **By the Numbers**

A Delta Science Program Sea Grant State Fellow will present a summary of current numbers related to Delta water and environmental management. The summary will inform the Council of recent counts, measurements and monitoring figures driving water and environmental management issues.

### **List of Attachments**

Attachment 1: By the Numbers Summary *(to be provided at the Council meeting)*

### **Contacts**

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