

**TESTIMONY OF STEVE THOMPSON, MANAGER, CALIFORNIA-NEVADA
OPERATIONS OFFICE, FISH AND WILDLIFE SERVICE,
U.S. DEPARTMENT OF THE INTERIOR,
BEFORE THE HOUSE NATURAL RESOURCES SUBCOMMITTEE ON
WATER AND POWER REGARDING THE UPPER SAN FRANCISCO BAY-
DELTA ECOSYSTEM**

VALLEJO, CALIFORNIA

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Good Morning Madam Chair and Members of the Subcommittee. My name is Steve Thompson, and I am the Manager of the California-Nevada Operations Office of the U.S. Fish and Wildlife Service. I am pleased to be here today on behalf of the Department of the Interior to discuss the current health of the Upper San Francisco Bay-Delta ecosystem and its native fishes, and how the Service is responding to declines in the Delta smelt, a pelagic, or open water, fish that is a key indicator of the health of the Delta ecosystem.

I will focus my testimony on three areas – first, an overview of the status of the Delta and its species; second, a description of how the Service and its partner agencies are working together to meet the estuary’s scientific, resource, and managerial needs; and finally, the extent of challenges the Service faces in restoring the health of this ecosystem.

Status of the Delta and Delta Species

The Delta is California’s major collection point for water, serving two-thirds of our State’s population and providing irrigation water for millions of acres of farm land. The region supports wetland and riparian habitats, as well as numerous fish and wildlife species. However, these wetland habitats, as well as the hydrology of the Delta itself,

have been greatly altered by over 150 years of settlement and development. In recent years, dramatic and unexpected population declines have occurred in the delta smelt and several other pelagic fish, including juvenile striped bass and longfin smelt.

Compounding the problem is a decline in the minute aquatic organisms, such as zooplankton and copepods, which make up much of the food supply for these small fish.

The delta smelt is one of several pelagic fish species in decline in the Delta. The species was listed as threatened under the Endangered Species Act (ESA) in 1993. The delta smelt is a key indicator of the Delta ecosystem's health, and the Service believes its current decline is an indicator that the Delta's health is in crisis. The environmental and physical conditions of the Delta are extremely complex and not fully understood.

The Service is actively involved in efforts to identify environmental risks and possible corrective actions to recover the delta smelt. Although the effects of water project operations may result in adverse impacts to delta smelt, it is apparent that other factors may play a role in limiting the potential for recovery, including competition and predation from exotic aquatic invasive species, contaminants, changes in habitat quality and availability, and changes in food supply. We are also working to better understand the changing climate and to predict and adapt to its effects on the natural environment.

The only thing we know with certainty is that there are no simple solutions to the problems facing the Delta.

Indices from surveys conducted since 2000 demonstrate a downward trend for delta

smelt. The indices are the products of four different sampling surveys conducted in the Delta in different seasons of the water year. Each of these surveys indicates a pattern of decline in delta smelt over the past several decades. However, it is important to remember that the surveys provide only snapshots from similar vantage points over time. Although they provide a good trend analysis, the surveys generate an entirely different type of data from that developed from the continuous monitoring done at the major pumping plants.

The most recent data from the spring survey of juvenile delta smelt that ended on June 9, 2007, found only 37 juvenile delta smelt (20 mm or greater in length). This recent population figure is far below the 884 found in the 2006 survey conducted during the same season, and much fewer than the next worst year of 2002 when 455 juvenile smelt had been identified through the same period. The Service is very concerned about the data and, although we do not completely understand the reasons for the decline, we are working closely with our partners to understand what the data means for the delta smelt and we are working to reverse these declines.

How the Regulatory Process is Working

In response to these declines, the Pelagic Organism Decline (POD) work team was formed in 2005 to conduct focused and in-depth research to investigate causes of the unexpected decline in pelagic organisms. This team brought the best scientific expertise together to work on this problem, and it is generating a tremendous amount of new and potentially useful information. However, it is also essential to recognize that the POD

work team does not make either decisions or recommendations. Instead, it provides scientific information that informs a special working group, discussed in detail below, which makes the decisions.

An adaptive management approach is used to rapidly assess new information and apply measures intended to address the decline. Created pursuant to the Service's 1995 biological opinion on operations of the federal and state water projects, the Delta Smelt Working Group analyzes the most current data available on delta smelt and physical conditions in the Delta and provides real-time recommendations to the Service regarding modifications of project operations. The working group was specifically set up to review all available information and advise the Service on implementation of actions that can be taken to minimize effects on the species of pumping water out of the Delta. The working group uses information from many sources, including the California Resources Agency's 2006 Pelagic Fish Action Plan, which describes a suite of possible actions intended to improve habitat and minimize entrainment, or the drawing of fish into the pump flow. This suite of possible actions includes project modifications to better protect adult delta smelt in winter before spawning as well as spring modifications to better protect juveniles.

The Service, and others, assisted the California Departments of Water Resources and Fish and Game in preparing the 2005 Delta Smelt Action Plan which specifically addresses actions that have been or could be taken by resource agencies to further research needs and reduce population declines, including restoration projects for the Delta, Suisun

Marsh, and San Pablo Bay that are intended to improve habitat conditions for the delta smelt and other State, federally-listed, and candidate species.

Information from the working group is reviewed by the Water Operations Management Team (WOMT), which is comprised of management level representatives from the Service, the Bureau of Reclamation, the National Marine Fisheries Service, the California Department of Water Resources, and the California Department of Fish and Game. This team has several adaptive water management tools that can be used to help protect delta smelt including, but not limited to, water available through sections (b)(2) and (b)(3) of the Central Valley Project Improvement Act and the Environmental Water Account. WOMT's responsibility also involves balancing habitat needs for multiple species, including other listed species. WOMT is careful to consider the effect of water management operations on these species so that actions taken to benefit delta smelt in the spring/summer do not result in unintended adverse effects later in the year.

Under the current adaptive management process for water project operations, decisions regarding operation of the pumps in the Delta must consider many factors, including public safety, water supply reliability, and cost, as well as fish health and status requirements. The first step is data collection, including the continued collection of hydrologic data by the California Department of Water Resources, the Bureau of Reclamation, and the U.S. Geological Survey. The POD work team also provides input to the water operations decision-making process through regular updates. Using this data, the working group can recommend a change in Project operations, which is then forwarded to the WOMT.

The agencies also inform and advise stakeholders who may be affected when the agencies make a particularly challenging decision about project operations. The WOMT considers recommendations and seeks consensus on potential actions, and may adopt or modify a recommendation and direct that the Environmental Water Account and water available under the Central Valley Project Improvement Act be used to implement a reduction in the export of water. For particularly controversial recommendations, State and federal agency leaders also may engage in the decision-making process. Decisions regarding changes to Project operations often must be made quickly if they are to be effective.

The Bureau of Reclamation and California Department of Water Resources then implement the reduction in water through the pumps. Implementation can occur within three hours of a decision, if necessary. If the WOMT does not fully implement the working group recommendations, the WOMT must document the rationale for its decision; it must also notify the Service if it is not fully implementing the working group's recommendations.

This process, developed over time, is an effective method of collecting information, analyzing that information, and making rapid decisions about how to help the delta smelt under different conditions. The recent management of flows and export facilities to minimize impacts on delta smelt has been collaborative and effective. The collaborative process among the federal and State agencies is working as intended. However, there are still questions and concerns about the long-term impacts to the delta smelt.

Addressing the Long-Term Challenges Facing the Ecosystem

The Pelagic Organism Decline work team, discussed above, is generating a significant amount of new information, and the policy and regulatory entities ultimately will use that information to make decisions about what actions should be taken to protect the species. Recently, the Service formed a Recovery Team to update the 1996 Delta Native Fishes Recovery Plan to include new scientific information that is the result of the extensive studies now underway and other new information developed since the approval of the current recovery plan in 1996. The team is updating both the recovery criteria and implementation strategies for the covered species. This plan will help guide future recovery actions that will hopefully ameliorate the downward trend for delta smelt. The current schedule calls for completion of the revised Recovery Plan in summer of 2008.

In addition, the Service is participating in the development of the Bay-Delta Conservation Plan, an effort by the major Delta water users that began in 2006. Completion of the plan is scheduled for late 2009. The plan is based on the concept of an ESA Habitat Conservation Plan and is intended to meet the requirements of the ESA, the California Endangered Species Act, and, potentially, the California Natural Community Conservation Planning Act. The plan should provide certainty for water users, who will, in exchange, commit to a specific set of mitigation activities for the benefit of the delta smelt and other species.

Further, the Service is revising the existing biological opinion for Delta operations. In May 2007 the Federal District Court for the Eastern District of California found the biological opinion's "no jeopardy" finding arbitrary, capricious, and contrary to law for several reasons, among them a failure to adequately consider impacts to critical habitat and a failure, when setting take limits, to consider take in the context of most recent overall species abundance and jeopardy. However, the 2005 biological opinion will remain in effect until a solution can be reached in the remedies phase of the trial. A hearing on this phase is scheduled for Aug. 21, 2007. In the meantime, the Service reinitiated consultation on federal and state water projects under the 2005 biological opinion last year and is proceeding with that effort, even while it awaits further direction from the court.

The Service is also continuing to develop habitat that will help the Delta species, and we are in the early stages of investigating other possible helpful activities. Finally, we continue to actively participate in the processes begun under the CALFED Bay-Delta Program.

Conclusion

Recovery of the delta smelt continues to be a high priority for the Service. Our knowledge of this species and its needs continues to increase. The Service is working closely with partner agencies to make real-time management decisions consistent with our adaptive management approach to water operations, and we are updating and implementing recovery strategies as quickly as the science becomes available.

Madam Chair, this concludes my remarks. Thank you for the opportunity to appear before you today, and I will be happy to answer any questions that you or the Members of the Subcommittee may have on this important subject.