

## **United States Department of the Interior**

### **Comments Regarding the California State Water Resources Control Board's Public Workshop for Consideration of the Pelagic Organism Decline in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary**

*January 11, 2007*

On December 11, 2007, the State water Resource Control Board (Board or SWRCB) issued a Notice of Public Workshop, concerning the Pelagic Organism Decline (POD) in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. In that Notice, the Board requested that interested parties address six specific issues. The U.S. Fish and Wildlife Service (Service) and U.S. Bureau of Reclamation (Reclamation) have been and remain involved in efforts to examine the decline of pelagic organisms in the San Francisco/Sacramento-San Joaquin Bay Estuary (Bay Estuary). The U.S. Department of the Interior (Interior) submits the following information in response to the Board's December 11, 2007 notice.

#### **Issues 1 - 4**

Under issues 1 through 4, the Board sought information regarding various studies and reports on POD in the Bay Estuary. The Service and Reclamation participate in the Interagency Ecological Program (IEP), which is involved with researching POD issues. The information and presentation of the IEP address many of the Board's issues 1 through 4 in the Board's December 11, 2007 Notice.

#### **Issue 5**

Under issue 5, the Board requests information on the status of efforts to develop a delta smelt refuge. Delta smelt have been in a state of decline since listing and current population indexes are at or near all-time lows. Such low indexes and the fact that delta smelt are essentially annual fish that die after spawning present the possibility that delta smelt could go extinct in the wild before efforts to restore the Delta can produce an environment favorable to recovery.

This has led to the concept of maintaining a genetic refugial population representative of the wild population for two specific purposes:

- 1) Ensure there are fish available for restoration should the population in the wild go extinct; and
- 2) Provide a source of fish for supplementation of wild populations if necessary as a recovery action.

All collection of wild fish for research purposes was halted in 2006. Approximately 2000 delta smelt that were captured in 2006 remain in captivity at the UC Davis Fish Culture and Conservation Facility (FCCL) at the state pumping facility in Byron. Barring additional collection of wild fish for recovery purposes, this population of captive wild fish needs to be propagated in such a manner as to begin a genetic refugial population. Much information necessary to establish a genetic refugia still needs to be developed. This includes information regarding:

- Whether the wild population of delta smelt is one homogeneous population or several genetically distinct populations;
- Estimates of historic and current abundance; and
- Genetic variability within the wild population.

Given the current state of knowledge, maintaining a genetic refugial population without loss of genetic variability within the population(s) will require maintaining 100-250 family groups and 100,000-250,000 fish.

**Current Status.** The Service and FCCL are cooperating on the development of a genetic refugial population. Accomplishments to date include:

- Development of a breeding plan to guide the use of the remaining captive wild fish;
- Funding of genetic studies to determine the genetic composition of wild populations;
- Facility upgrades at FCCL.

**FCCL** - The FCCL facility at Byron has been largely funded by the California Department of Water Resources (DWR). FCCL has the capability to reliably culture delta smelt. The current facility is geared toward production of cultured fish for research. To undertake development and maintenance of a genetic refugial population, DWR has dedicated approximately \$800,000 to expand its facility and fund staff increases. When completed, this expansion will be able capable of holding 15-30 family pairs.

**Livingston Stone National Fish Hatchery (LS)** - During 2006-2007, operating temporarily out of salmon culture facilities, LS demonstrated the ability to transport sub-adult fish and maintain them through spawning. LS was also able to successfully spawn fish, but had limited success in rearing fry. The Service has completed construction of a small facility dedicated to culture of delta smelt. This facility will be capable of holding 25-30 family pairs and producing 25,000-30,000 fish.

**Future Plans.** FCCL - To facilitate developing a refugial population with the remaining captive wild fish, the FCCL is expanding into one half of the Collection, Handling, Transportation, and Release (CHTR) Building at the state pumping facility in Byron. This \$800,000 expansion, funded by DWR, will allow the FCCL to maintain a refugial population of about 20 family pairs. Occupation of half the CHTR Building is only guaranteed for 2 years, after which the CHTR Building may needed for other studies associated with operation of the state pumps.

To extend operation of the genetic refugial population at FCCL, one of three things will be necessary:

- Extend operations in the CHTR building;
- Construct another building on site. Estimates are \$2 million for a new building capable of holding up to 60 family groups;
- Reduce/curtail production of smelt for research at the current facility and use the facility for the refugial population.

Livingston-Stone National Fish Hatchery - In 2008, LS will receive approximately 1,000 captive-reared delta smelt to continue working toward closing the life-cycle for delta smelt culture. In addition, LS will serve as a back-up facility to receive and maintain a sample of the genetic refugial population as insurance against catastrophe in Byron. Once LS has demonstrated the ability to reliability spawn and rear delta smelt, LS will be integrated into the refugial population breeding plan, with a potential to hold 25-30 family groups.

**New Service Hatchery.** Even with a new building at Byron and LS operating at full capacity, the capacity for a genetic refugial population at the two facilities is less than the minimum of 100 family groups. This does not take into account any future conservation actions for other species, such as longfin smelt, green sturgeon, or Sacramento perch. For this reason, the Service is making plans for construction of a new facility capable of addressing conservation needs of delta smelt plus two other species. Estimates for such a facility are \$15-20 million. This facility would serve as the home of a genetic refugial population of 100-250 family groups, along with providing the ability to produce 250,000-500,000 delta smelt for supplementation of the wild population. The Service is looking into three sites: Rio Vista, Rough and Ready Island, and the federal pumping facility in Tracy to house this facility.

#### **Timeline.**

Near-Term (1-2 years):

- FCCL maintains a genetic refugial population of 20 family pairs in CHTR Building.
- LS develops capability to propagate delta smelt and maintains back-up population.
- Service works to select site and permit new facility.

Mid-Term (3-4 years):

- FCCL maintains 20 family groups in half CHTR Building, expands operations to 40 family groups in full CHTR Building, or builds new facility to hold 60 family groups.
- LS begins refugial operations, maintaining 25-30 family groups.

- Service begins construction of new facility.

Long-Term (4-5 years):

- FCCL returns to research operations, possibly maintaining back-up refugial population
- LS ceases refugial operations, possibly maintains back-up refugial population
- Service begins maintaining full refugial population in new facility.

## **Issue 6**

Under issue 6, the Board requests information regarding short-term and long-term actions that the Board should consider to improve habitat conditions for fishery resources in the Bay Estuary. Currently, Reclamation is operating the Central Valley Project (CVP) and DWR is operating the State Water Project (SWP) in accordance with a December 14, 2007 order issued by federal district court Judge Wanger, of the Eastern District for California. The terms of that order are temporary and will remain in-place until the Service completes a new biological opinion for the impacts of the CVP-SWP operations on the delta smelt. Reclamation is also in consultation with the National Marine Fisheries Service (NMFS) regarding impacts of CVP-SWP operations on listed species of salmon, steelhead and green sturgeon. The schedule for the aforementioned consultations is as follows:

1. Reclamation expects to issue a biological assessment by the end of April, 2008.
2. By court order, the Service must issue a final biological opinion for the delta smelt September 15, 2008.
3. The Service and Reclamation expect NMFS to issue a final biological opinion for listed salmon, steelhead and green sturgeon by the end of December, 2008.

During the consultation period, Reclamation and DWR are charged with operating the CVP and SWP to protect delta smelt pursuant to the export criteria in Judge Wanger's order, as well as studying and monitoring how operating to the export criteria impact delta smelt. The Service and Reclamation expect to have greater information on the CVP and SWP's impact on delta smelt by the close of the section 7 consultation period. Moreover, the Service cannot predetermine the outcome of the section 7 process, so neither Reclamation nor the Service know now what conditions may be placed on the CVP and SWP as a result of the section 7 process.

Once the Service and NMFS issue new biological opinions, the Service or NMFS may require new export limitation criteria for the CVP and SWP to address sensitive fishery entrainment effects. These criteria may differ from past operations and those under Judge Wanger's order. Moreover, it is possible that the interim operations outlined in the order, or similar operational limitations, become permanent for the foreseeable future.

If new CVP-SWP export limitation criteria, or similar export limitation criteria, are recommended through the new biological opinion(s), the Board may ultimately be in the position to consider whether the new long-term CVP-SWP export criteria conflict with D-1641 percent of inflow export limitation.

Given the obligations currently imposed on Reclamation by the Court and the pending status of section 7 consultations over CVP and SWP operations, Interior believes that Board action at this time is premature. As such, Interior makes no specific recommendations for any short or long-term Board actions at this time. However, Interior respectfully requests that the Board carefully consider whether any proposals for short or long-term Board actions would impair Reclamation or the Service's ability to comply with the Judge Wanger order, or impair or obstruct their ability to fully evaluate the impacts of the CVP operations on listed species.