2025 Guidelines and Considerations for

Requesting Delta Smelt from the Livingston Stone National Fish Hatchery

This document is for third party collaborators interested in requesting cultured delta smelt from the refuge population held at Livingston Stone National Fish Hatchery (LSNFH) for applied science or research purposes. The goal is to ensure compliance with state and federal permits; identify relative roles and responsibilities between researchers and hatchery personnel; and to prevent, to the maximum extent practicable, potential harm to research animals. Researchers are expected to be familiar with requirements included in the federal and state Endangered Species Act permits under which LSNFH and California-Nevada Fish Health Center (CA-NV FHC) operates and must obtain and comply with all necessary permits, authorizations, and agreements.

Background: Livingston Stone National Fish Hatchery is primarily a salmon hatchery, but it also serves to house a refuge population of genetically diverse family groups of delta smelt, held as a back up to the population at the main rearing facility. Each year, LSNFH receives a batch of cultured delta smelt reared at the UC Davis Fish Conservation and Culture Laboratory (FCCL) to serve as a genetic back up. They are held in reserve for one year until the next generation of fish is received from the FCCL. The now 2-year-old fish may then be available for applied science or research, depending on whether LSNFH or FCCL need them for breeding, hatchery development, milt collection, or gamete production, in that order of priority. A limited number of these 2-year-old fish (alive or euthanized) from this cohort may be available for applied science or research purposes each year to make space for the next generation of refuge fish. Fish availability varies each year based on the number of delta smelt received from FCCL and the survival rates of the fish reared at LSNFH. However, in the past four to five years, LSNFH has consistently received between 4,000 and 6,000 fish annually (roughly 20 to 30 multi-family groups, approximately 200 fish per multi-family group), with survival rates of 70% or higher. The typical life expectancy for delta smelt in the wild is 1 year and fish held in captivity are often able to reach 2 years of age or greater under hatchery care. These 2-year-old fish held at LSNFH are typically at the end of their life expectancy and may be more susceptible to disease and other lethal conditions. As such, these fish may not be appropriate for all study objectives. Due to their age and other factors such as permit conditions, the fish available are not suitable for release into the wild and will only be made available for applied science or research. Any other purposes will be assessed on a case-by-case basis for appropriateness to leave the LSNFH facility.

LSNFH is located at the base of Shasta Dam and has strict security protocols, so any fish allocated to researchers must be transferred outside of the facility for the study. If a researcher is approved to receive fish, they are responsible for picking up the fish at a UC

Davis facility such as FCCL or the Center for Aquatic Biology & Aquaculture (CABA) after the fish have been transferred from LSNFH. Other locations may be suitable for pick-up, but will be determined on a case-by-case basis. Researchers should coordinate with those identified below in the "Fish Requests" contacts section to limit interruptions to daily hatchery operations at LSNFH, FCCL, and CA-NV Fish Health Center.

Requests for Fish: All requests should be sent to the contacts at the bottom of this document. The following information should be provided at the time of the request:

- Research study plan, including relevant background, objectives, and proposed methods
- Number of fish requested and any special requests regarding fish selection (special requests may not be able to be accommodated, based on the limited number of fish available)
- Necessary permits and approvals (see Permitting below) and contact information for the Primary Investigator
- Proposed date of transport and timeline of activities
- Planned disposition of fish specimens upon completion of the study (delta smelt from LSNFH are not suitable for release and will need to be properly disposed of after the study is complete)
- Proof of funding and other relevant information that provides assurances
- Any specific requests regarding fish care at LSNFH (see section on Assistance with holding, rearing, feeding, transport below for more details)
- Commitment to sharing data and results of any research with USFWS (*e.g.*, white papers, publications, journal articles, etc.)

Timeline for Requesting Fish: All fish requests should be made by September 15, 2025 unless guided otherwise. All fish requests will be shared with the Culture and Supplementation of Smelt (CASS) Captive Propagation Working Group (CPWG) for awareness, transparency, and collective working group discussion. The CPWGs recommendation to accept or deny fish requests will be shared with the Steering Committee for final acknowledgement of the recommendations. For fish requests that are more routine in nature, less complex, and result in easy approval, this could be performed by an email update to the Steering Committee. For fish requests that are complex and controversial, this may require a full meeting with the complete Steering Committee to walk through the decision for final approval and may result in potential additional information requests to the researcher from those in the CPWG briefing the Steering Committee. As a result, the timing of approvals may vary on a case-by-case basis. However, the CPWG aims to maintain open lines of communication with the researcher and provide a timely response regarding the decision. Approved fish requests will be communicated by October, with fish expected to become available in late fall (*i.e.*,

November). We aim to give researchers at least one month's notice or more regarding the outcome of their fish request approval.

Special Requirements: Due to the limited number of fish available and the timeline in which they are available, special requests regarding fish size, age, maturity, sex, or condition may not be able to be accommodated. Special requests related to fish condition (size, age, sex), holding, and rearing, will be considered only under limited circumstances and are subject to the ability of the FCCL, LSNFH, or other hatchery staff to meet the request. Such requests may not be able to be routinely accommodated and will be evaluated on a case-by-case basis, with no guarantee of approval.

Markings and Tags: The fish allocated for research from LSNFH are **not** suitable for release so marking and tagging requirements do not apply.

Assistance with Holding, Rearing, Feeding, Transport: The LSNFH staff has limited availability to accommodate special requests in terms of fish care or treatment. Due to limited space at LSNFH, research and fish care must take place at a secondary location and be maintained by research personnel. Individual fish associated with the approved fish requests will likely be transported annually from the LSNFH to a UC Davis location such as FCCL or CABA for pick-up (mortalities and live fish). This approach is to accommodate the security constraints the LSNFH has that limits researchers from coming directly to the LSNFH.

Permitting: Researchers are responsible for pursuing regulatory permits separately and those will need to be in place before fish can be provided. Permits required may include CDFW scientific collection permits for CESA species and associated memorandums of understanding (MOU), and USFWS section 10(a)1(A) recovery permits. Existing permits may cover your activity, to evaluate applicability, please contact Katherine Sun at Katherine_Sun@fws.gov. For more information regarding state regulatory requirements, please contact Paige Uttley at Paige.Uttley@Wildlife.ca.gov. For more information regarding federal regulatory requirements, please contact Dama Valle at Damayanti_Valle@fws.gov. Because of the protected status of the research fish, researchers may not retain any part of the fish without the appropriate approval or authority.

Communication: To ensure that fish requests can be fulfilled to the best of our ability, it is important that both parties (researcher and hatchery) have a clear understanding of their obligations related to each fish request. Upon receiving approval to receive fish, the researcher should periodically "touch base" with the USFWS contacts to ensure that each party is on track to fulfill their mutually agreed responsibilities.

Disasters and Unforeseen Events: Disasters and unforeseen events can occur at fish hatcheries, and such an event may result in the inability to fulfill previously approved fish requests. If such an event occurs, the hatchery and USFWS contacts will communicate with the researchers to determine next steps. In these cases, it is likely that LSNFH will be

unable to provide the agreed upon fish, so requestors should plan accordingly for such contingencies.

Canceled Studies: If a proposed study is canceled after a fish request has been approved, it is the responsibility of the researcher to inform the USFWS contacts as soon as possible. The allocated fish may be able to be used for another study or to approve a different fish request.

Agreement to Provide Data: Researchers must agree to provide research summaries and/or final publications or reports to the listed contacts at the conclusion of the project.

Contacts:

Fish Requests

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Environmental Compliance and Permitting Inquiries

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