

# Central Valley Spring-run Chinook Salmon

## *Why develop a Juvenile Production Estimate (JPE)?*



### *Regulatory Requirement*

- Spring-run Chinook Salmon are listed as threatened under both the California Endangered Species Act and the Federal Endangered Species Act.
- On March 2020 the California Department of Fish and Wildlife (CDFW) issued incidental take permit number 2081-2019-066-00 (SWP ITP) to the California Department of Water Resources (DWR) authorizing take of winter-and spring-run Chinook salmon, Delta smelt, and longfin smelt as a result of long-term operations of the State Water Project (SWP).
- The SWP ITP requires DWR to develop a method for estimating an annual spring-run Chinook salmon juvenile production estimate (JPE) (Condition of Approval 7.5.2).
- The new spring-run JPE is intended to help manage SWP operations to minimize spring-run entrainment and help achieve other management objectives (see below).
- The SWP ITP requires specific steps and timelines for developing and implementing a spring-run JPE:
  - a) Form an inter-agency Spring-run JPE Team.
  - b) Design and implement a JPE Monitoring Plan for developing and testing JPE approach(es), including necessary monitoring and analytical needs.
  - c) Use results of spring-run JPE studies and monitoring to prepare a draft plan for producing an annual JPE.
  - d) Review and approval of the draft plan by the Spring-Run JPE Team and CDFW.
  - e) Establishment of a spring-run monitoring program and annual calculation of a spring-run JPE by the Spring-run JPE Team using monitoring program data.
- After the spring-run JPE is approved by CDFW, implemented, and evaluated by the Spring-run JPE Team, DWR may request an amendment to modify or replace the current spring-run hatchery surrogate daily loss threshold (Conditions of Approval 8.6.4 and 8.6.5) with a new entrainment minimization measure that incorporates new information from the JPE.

- The Biological Opinion issued in 2019 by the National Marine Fisheries Service for long-term operations of the SWP and Central Valley Project requires DWR and Reclamation to assess a Delta Performance Objective for young-of-year Central Valley spring-run Chinook salmon.

### *Workshop Objective*

- This workshop will serve as a public scoping meeting to inform planning for monitoring and science needed to develop a spring-run JPE.
- The objective of this workshop is to convene subject-matter experts and stakeholders and assess the current science and monitoring of Sacramento River drainage spring-run Chinook salmon. The workshop will also help identify key gaps in science and monitoring needed to develop a spring-run JPE.
- The workshop will not identify a specific candidate method to estimate a spring-run JPE. Rather, this scoping meeting will provide the foundation for the necessary research, tool development, and/or monitoring needed to develop a JPE.
- This workshop will therefore serve simultaneously as a public scoping meeting and as a convening of subject-matter experts to help inform the Spring-run JPE Monitoring Plan, which in turn will outline the steps DWR and its partners will take to develop a JPE approach.
- To achieve this objective, the workshop is organized around **four broad themes**:
  - 1) the state of knowledge of spring-run **distribution and life history**;
  - 2) the extent and nature of spring-run **adult and juvenile monitoring**;
  - 3) spring-run **identification tools**, including genetic and length-at-date tools, and their tradeoffs;
  - 4) current approaches to producing and using **juvenile production estimates (JPEs)**, including identifying knowledge gaps for producing a JPE for spring-run Chinook salmon.

### *Target Schedule*

- DWR and its partners conduct initial scoping activities (May to September 2020)
- Development of JPE workshop notes and a peer-reviewed manuscript (October 2020-mid-2021)
- Spring-run JPE Team submits draft Spring-run JPE Monitoring Plan to CDFW for approval (December 2020)
- Spring-run JPE Team implements research and monitoring activities as outlined in the Spring-run JPE Monitoring Plan (January 2021 to May 2024)
- JPE approach selected based on multiple factors (e.g. feasibility, accuracy, timeliness, management value, scientific value, cost) and subject to CDFW approval (October 2024).
- Approved JPE approach implemented each year with ongoing evaluation by the Spring-run JPE Team (January 2025).

### *Linkages to Other Science and Management Objectives*

- Monitoring to support the spring-run JPE will be integrated with region-wide salmon monitoring or more coordinated research and management.
- Data from the spring-run JPE effort will support spring-run life cycle modeling, and other scientific efforts used for recovery planning.
- The spring-run JPE program will provide monitoring information necessary for adaptive management of spring-run habitat restoration and resource planning processes such as voluntary settlement agreements, conveyance, and the Central Valley Improvement Act.