

Issuance of an Endangered Species Act Section 10(a)(1)(A) Enhancement Permit to the U.S. Fish and Wildlife Service for Hatchery and Monitoring Activities Associated with the San Joaquin River Restoration Program
FINDING OF NO SIGNIFICANT IMPACT

Background

Proposed Action:

The proposed action is to issue a permit under Endangered Species Act (ESA) section 10(a)(1)(A) to United States Fish and Wildlife Service (USFWS), for a period of five years authorizing the implementation of the Hatchery and Genetics Management Plan (HGMP) at the SCARF/SIRF/Interim Facility (SCARF Facilities) and other activities associated with the SJRRP.

Alternatives Evaluated in the Environmental Assessment:

Alternative 1: Do not issue the permit, do not approve the HGMP (No-Action Alternative).

Alternative 2: Issue the section 10(a)(1)(A) permit with conditions and approve the HGMP.

Selected Alternative:

Alternative 2.

Mitigation Measures and Measures to Reduce Impacts:

- Adherence to prescribed holding times and release protocols for any fish treated with anesthetics or antibiotics.
- Butte Creek juvenile collections will be based on the number of associated female spawners. The number of juveniles allowed for collection will scale up on a two to one basis with the number of female spawners from a minimum of 250 female spawners to a maximum of 1,455 female spawners. No juveniles will be collected if the number of female spawners is less than 250.
- Adherence to protocols to prevent the spread of invasive species and pathogens during transport and release of fish.
- Ensure 100 percent of production is marked (adipose fin clipped) and tagged (coded wire tagged) prior to release to assess impacts (both adverse and beneficial) of the Conservation Hatchery Program.

Related Consultations:

The National Marine Fisheries Service completed an Endangered Species Act (ESA) Section 7(a)(2) Biological and Conferencing Opinion and Fish and Wildlife Coordination Act Recommendations on the issuance of an ESA Section 10(a)(1)(A) Enhancement Permit to the United States Fish and Wildlife Service for implementing the San Joaquin River Restoration Program, including an accompanying Hatchery and Genetic Management Plan. NMFS Consultation Number: WCR-2017-SA00345.

Significance Review

The Council on Environmental Quality (CEQ) Regulations state that the determination of significance using an analysis of effects requires examination of both context and intensity and lists ten criteria for intensity (40 CFR 1508.27). In addition, the Companion Manual for National Oceanic and Atmospheric Administration Administrative Order 216-6A provides sixteen criteria, the same ten as the CEQ Regulations and six additional, for determining whether the impacts of a

proposed action are significant. Each criterion is discussed below with respect to the proposed action and considered individually as well as in combination with the others.

1. Can the proposed action reasonably be expected to cause both beneficial and adverse impacts that overall may result in a significant effect, even if the effect will be beneficial?

The proposed action will be implemented as described in the HGMP and all mitigation measures will be followed; therefore, impacts caused by the proposed action are not expected to result in significant effects.

2. Can the proposed action reasonably be expected to significantly affect public health or safety?

The SCARF Facilities follow all state and Federal water quality laws and regulations associated with standard hatchery practices. Details can be found in the associated environmental analysis (EA) and HGMP. Therefore the effects to public health and safety will not be significant.

3. Can the proposed action reasonably be expected to result in significant impacts to unique characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas?

There are no historic or cultural resources near the premises and the hatchery is well away from the streambed. Therefore, there will be no effect to any unique characteristics in the immediate geographic area.

4. Are the proposed action's effects on the quality of the human environment likely to be highly controversial?

The CV spring-run Chinook salmon releases that are part of the proposed action have the potential to affect Delta pumping activities due to existing regulatory requirements for Sacramento River winter-run Chinook salmon; however, the 4(d) *de minimus* rule and NMFS' spring-run technical memorandum¹ are in place to account for those releases. NMFS has carefully considered the effects of hatcheries to the human environment and concluded that the HGMP and SCARF Facilities are using the best scientific practices and methods available. Therefore, scientific controversy over the potential effect on the quality of the human environment is not likely.

5. Are the proposed action's effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

There is little uncertainty or unique or unknown risks associated with the proposed action. Many similar ESA section 10(a)(1)(A) research and enhancement permits have been issued with similar effects. Conservation hatcheries programs have been well studied and a number of elements associated with the proposed action have been previously analyzed in EAs for the two permits that are to be replaced by issuance of the proposed permit².

¹ http://www.westcoast.fisheries.noaa.gov/central_valley/san_joaquin/san_joaquin_reint.html

6. Can the proposed action reasonably be expected to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?

Previously, all fish contributing to the SJRRP reintroduction effort have originated from non-listed or threatened hatchery stocks. These fish are typically considered to be in excess of recovery needs and therefore the section 9 take prohibitions do not apply (70 FR 37160). Issuance of Permit 20571 may result in collection of natural-origin spring-run Chinook salmon juveniles (listed as threatened) from Butte Creek. Authorizing the collection of ESA-listed natural-origin Chinook salmon for reintroduction purposes could establish a precedent for future actions. However, the collection of fish from Butte Creek is subject to coordination and approval from California Department of Fish and Wildlife and other members of the SJRRP and is contingent upon a number of factors (i.e., estimated adult escapement, estimated pre-spawn mortality, environmental conditions) intended to minimize overall impacts to the source population.

Simultaneous multi-stock reintroduction will dramatically increase the diversity of the reintroduced population. If determined that the risks to any of the source population(s) is too high, the Conservation Program may use only one source population as broodstock, delay collections from one or more populations, or collect fewer individuals from some populations. The increased risk to the source population(s) is weighed against the benefits of representation and redundancy afforded by an additional, spatially separated population of CV spring-run Chinook salmon in the San Joaquin River. An additional source population decreases the demographic and environmental risks inherent in an evolutionarily significant unit (ESU) consisting of one or a few small populations.

Artificial propagation has occurred largely along the West Coast through the implementation of hatchery programs designed to spawn and rear salmon for release to rivers and streams. NMFS reviews HGMPs to determine hatchery effects (both positive and negative) on salmon population health, including abundance, productivity, spatial structure, and diversity of natural-origin fish. The HMGP for the SCARF facilities was reviewed for sufficiency before formal consultation began. Therefore the proposed action will not establish a precedent for future actions with significant effects.

7. Is the proposed action related to other actions that when considered together will have individually insignificant but cumulatively significant impacts?

Yes, but the effects of the entire SJRRP were analyzed in a programmatic environmental impact statement (EIS) completed by the U.S. Bureau of Reclamation in 2012². The proposed action is related to other actions that are part of the SJRRP. However, the SJRRP and the proposed action will result in benefits that increase the abundance and extends the range of CV spring-run Chinook salmon.

8. Can the proposed action reasonably be expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources?

² https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=2940

There should be no effect to historical sites or cultural resources, as there is no construction or alteration of the streambed included in the proposed action.

9. Can the proposed action reasonably be expected to have a significant impact on endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973?

An ESA section 7 consultation (WCR-2017-SA00345) associated with the proposed action was completed by NMFS, and concluded that the effects associated with the issuance of the ESA section 10(a)(1)(A) permit 20571 to the USFWS and the implementation of the HGMP actions would not result in significant impacts to California Central Valley (CCV) steelhead and CV spring-run Chinook salmon or their critical habitat. Over the long-term, the implementation of the activities described in the proposed HGMP will increase both spatial diversity and overall demographics of the CV spring-run Chinook salmon ESU. These increases will help to meet objectives for population redundancy and distribution, as outlined in the NMFS Final Recovery Plan for Central Valley Chinook Salmon and Steelhead³. The recovery plan has identified the San Joaquin River as one of the highest-priority watersheds (primary watersheds) for reintroduction. Therefore, the proposed action is expected to increase the likelihood of the long-term survival and recovery of the CV spring-run Chinook salmon ESU and is not expected to result in significant impacts.

10. Can the proposed action reasonably be expected to threaten a violation of Federal, state, or local law or requirements imposed for environmental protection?

The review of the proposed HGMP pursuant to ESA section 10(a)(1)(A), is designed to ensure compliance with the ESA, which is part of the purpose and need for the proposed action. Furthermore, a General Condition required by the ESA section 10(a)(1)(A) permit to be issued states, "The permit holder must obtain any other Federal, state, and local permits/authorizations necessary for the conduct of the activities provided for in this permit." Therefore, no Federal, state, or local laws will be violated.

11. Can the proposed action reasonably be expected to adversely affect stocks of marine mammals as defined in the Marine Mammal Protection Act?

No marine mammals are expected to be adversely affected by the proposed action. Hatchery production of CV spring-run Chinook salmon should increase the forage population of salmon in the Pacific Ocean, increasing the forage base for some marine mammal species.

12. Can the proposed action reasonably be expected to adversely affect managed fish species?

Fish propagated at the SCARF are not intended for harvest, although some fish are incidentally harvested in the ocean fishery. Hatchery production at the SCARF Facilities may indirectly benefit ocean fisheries and because all spring-run Chinook salmon released from SCARF Facilities will be marked (adipose fin-clipped) and tagged (coded-wire-tagged) at a rate of 100 percent and they will contribute to sustainable ocean harvest measurements

³

http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/recovery_planning_and_implementation/california_central_valley/california_central_valley_recovery_plan_documents.html

for Chinook salmon. Therefore, the proposed action is not expected to adversely affect managed fish species.

13. Can the proposed action reasonably be expected to adversely affect essential fish habitat as defined under the Magnuson-Stevens Fishery Conservation and Management Act?

The proposed action is expected to have no substantial effect on ocean and coastal habitats and/or essential fish habitat.

14. Can the proposed action reasonably be expected to adversely affect vulnerable marine or coastal ecosystems, including but not limited to, deep coral ecosystems?

The proposed action is expected to have no substantial effect on marine or coastal ecosystems.

15. Can the proposed action reasonably be expected to adversely affect biodiversity or ecosystem functioning (e.g., benthic productivity, predator-prey relationships, etc.)?

The proposed action is expected to have no substantial adverse impact to biodiversity and/or ecosystem function within the affected area. The proposed action is expected to have only beneficial impacts by increasing biodiversity and ecosystem function in the restoration area. Any potential decrease to the population in Butte Creek will be avoided by the proposed fish collection protocol, which maintains diversity within this Chinook salmon population.

16. Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?

The transport and release of fish, and a number of the hatchery activities described in the HGMP, have the potential to result in the spread of non-native species. However, adhering to the measures described in the permit application and HGMP will effectively prevent the spread of invasive species.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for the USFWS, it is hereby determined that the issuance of an ESA section 10(a)(1)(A) Enhancement Permit for implementation of the HGMP will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an environmental impact statement for this action is not necessary.



Barry A. Thom
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Date