UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

October 11, 2012

In response refer to:
2012/03733

Mr. Robert Clark
Assistant Regional Director
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2606
Sacramento, California 95825

Dear Mr. Clark:

Enclosed is Permit 14868, issued to United States Fish and Wildlife Service under the authority of section 10(a)(1)(A) of the Endangered Species Act (ESA) of 1973, as amended, and its implementing regulations. Permit 14868 authorizes take of ESA-listed Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*) from the Feather River Fish Hatchery (FRFH) for scientific research and enhancement activities to establish broodstock methodologies, and to allow collection of surplus eggs and/or juveniles from the FRFH to initiate studies associated with holding practices of spring-run Chinook associated with the San Joaquin River Restoration Program. In effecting the take authorized by Permit 14868, you will have accepted the terms and conditions of the permit and you will be prepared to comply with the provisions of the permit, the applicable regulations, and the ESA.

You are required to review Permit 14868 prior to engaging in your research activities and comply with the permit's conditions. The original and a file copy of the signature page are also enclosed. Please sign and date both and return the signature page marked "FILE COPY" to the National Marine Fisheries Service contact at the Central Valley Office. In the future, should you need a change in this authorization, please submit a modification request.

Your attention is directed to Section C, which describes annual reporting and authorization requirements. Reports are due by January 31, annually. Permit 14868 is subject to annual review based, in part, on your reported take per annual period and your compliance with the conditions of the permit. Permit 14868 expires on December 31, 2017.

Please note that Permit 14868 is not valid until the Central Valley Office receives the signed copy of the signature page. You may submit the copy by facsimile to (916) 930-3629, or by e-mail and then send the original by mail. Please contact Ms. Elif Fehm-Sullivan at (916) 930-3723, or via e-mail at Elif.Fehm-Sullivan@noaa.gov if you have any questions concerning this permit or require additional information.

Sincerely,

for Rodney R. McInnis
Regional Administrator

Enclosure

cc: Copy to Administrative File: 151422SWR2010SA00361

ENDANGERED SPECIES ACT SECTION 10(a)(1)(A) PERMIT FOR DIRECT TAKE OF LISTED SPECIES FOR SCIENTIFIC RESEARCH AND ENHANCEMENT PURPOSES

Permit Number: 14868

Permit Type: Scientific Research and Enhancement

Expiration Date: December 31, 2017

Reporting Period: January 1 through December 31, annually

Report Due Date: January 31, annually

Permit Holder
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2606
Sacramento, California 95825
Phone: (916) 414-6600

Responsible Party, Principal Investigator and Primary Contact
Robert Clark
Assistant Regional Director
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2606
Sacramento, California 95825
Phone: (916) 414-6581
(916) 468-8146
Email: Robert_Clarke@fws.gov

Co-Investigators
Paul Adelizi
A.J. Dill
Matt Bigelow
Margarita Gordus
Eric Guzman
Benessa Espino
Michael Ficele
Michelle Workman
Carl Mesick
Zachary Jackson

Authorization

This authorization is subject to the provisions of the Endangered Species Act (ESA) of 1973 (16 U.S.C. ' 1531-1543) as amended, the National Marine Fisheries Service (NMFS) regulations governing ESA-listed species permits (50 CFR Parts 222-226), and the conditions set forth hereinafter.

U.S. Fish and Wildlife Service (FWS) is hereby authorized take of Central Valley (CV) spring-run Chinook salmon (*Oncorhynchus tshawytscha*) from the Feather River Fish Hatchery (FRFH) (henceforth referred to as spring-run) listed under the ESA, for scientific research and

enhancement purposes, as cited in the permit holder's application and summarized below. Take numbers are listed by category in section A of this permit, (Table 1).

One step of the San Joaquin River Restoration Program (SJRRP) includes CV spring-run Chinook salmon being reintroduced into the San Joaquin River. Reintroduction is not one single event, but a series of several events that over time will lead to successful restoration of spring-run Chinook salmon to the San Joaquin River. In order for the reintroduction to be successful, the initial step of this reintroduction process will have a testing phase, where the collection, transportation, holding, rearing, and broodstock facilities can be tested to ensure that the program will not have an adverse effect on these listed fish. This permit authorizes the implementation of the necessary initial testing phase only.

Abstract

This is the original Section 10(a)(1)(A) Permit 14868. This permit authorizes FWS, under the auspices of the SJRRP, to collect, transport, rear, handle, and tag individuals to establish a broodstock of spring-run at the Interim Facility and the future Salmon Conservation and Research Facility (SCARF) located on the grounds of the existing San Joaquin Fish Hatchery in Friant, California. FWS, for a period of five years, is authorized to collect, transport and rear surplus eggs and/or juveniles annually from the FRFH. Individuals collected will be surplus spring-run eggs or juveniles from the FRFH, and otherwise would not contribute to the population.

This permit authorizes the collection, transport and rearing of 560 FRFH spring-run salmon eggs or juveniles during the first three years of the permit annually – and 2,760 eggs or juveniles in the fourth and fifth years, to establish broodstock in the Interim and SCARF facilities. In addition, the permit authorizes a low level of intentional mortality of 60 FRFH surplus juvenile spring-run Chinook salmon annually for pathogen analysis prior to transport to ensure that pathogens will not be transferred to either the Interim Facility or the SCARF.

The number of eggs or juveniles collected annually will be determined by the rearing capacity at the available facility at the time of collection. Once pathogen results are confirmed negative, collected eggs or juveniles will be trucked from the FRFH located in Oroville, California to a quarantine facility at either Silverado Fisheries Base (Silverado) located in Yountville, California or the Center for Aquatic Biology and Aquaculture (CABA) located in Davis, California. After the appropriate quarantine time, the eggs or juveniles will then be trucked to the Interim Facility or to the SCARF located on the grounds of the existing San Joaquin Fish Hatchery (SJFH) in Friant, California. Currently, the Interim Facility will be used for broodstock activities until the larger SCARF is constructed and in operation.

The establishment of broodstock includes the activities of holding, tagging, rearing juveniles to adults, and then spawning of adult broodstock. All fish brought into the Interim Facility or the SCARF will be sedated using tricaine methanesulfonate (MS-222) and will then be Coded Wire Tagged (CWT), Passive Integrated Transponder (PIT) tagged, and Visual Implant (VI) tagged for identification and tracking of individual broodstock. The entire population of captive reared broodstock will be genotyped for parental based tagging. A small fin clip will be collected from spawned fish and either dried on blotter paper or stored in ethanol. In the lab, the genetic sample from each fish will be genotyped, and the results will be stored in a parent database. Broodstock fish health will be monitored by California Department of Fish & Game (CDFG) pathologists. Treatment methods prescribed by fish pathologists for disease outbreaks and treatment protocols will be carried out by hatchery staff.

These juvenile fish will then be captivity reared at the facility to adults, for further use in the SJRRP. Once mature, all adult fish will be spawned to produce fish for further use in the SJRRP. The annual production estimates are provided in Table 3 below. All rearing and spawning of broodstock will follow protocols outlined in the 2010 SJRRP Hatchery and Genetic Management Plan (HGMP) to ensure the activities reduce hatchery influence and minimize genetic effects. All juveniles produced at either the Interim Facility or SCARF will be will be adipose fin clipped and tagged with a CWT (100 percent of fish will be clipped and tagged). Juveniles will be reared until release into the San Joaquin River once the proper ESA section 10(a)(1)(A) permitting and 10(j) experimental population designation are in place and a portion be retained and used for broodstock. If a 10(j) experimental population is not designated by the time of the termination of this permit, FWS must work with NMFS to develop a suitable plan for the disposition of the fish rearing and being held at the Interim Facility or SCARF.

A. Number and Species of Animals

This permit is for work to be conducted over an approximate 5 year period. Take numbers listed in Table 1 are the maximum take authorized per annual reporting period (January 1 through December 31) for the CV spring-run Chinook salmon Evolutionary Significant Unit (ESU).

Table 1. Summary of Annual Broodstock Collection Associated with Permit 14868

SPECIES	LIFESTAGE	TOTAL EXPECTED TAKE	UNINTENTIONAL LETHAL TAKE	PERMITTED ACTION	CAPTURE METHOD	PROCEDURES
Central Valley spring-run Chinook Salmon (Feather River Hatchery)	Juvenile	60	0	Intentional (Directed) Mortality	Hand and/or Dip Net	Pathology Testing for Broodstock health assessment. Prior to transfer to the Interim or SCARF.
Central Valley spring-run Chinook Salmon (Feather River Hatchery)	Egg	2760**	2000*	Collect and Transport live animal	Hand and/or Dip Net	Anesthetize; Tag. Coded-Wire. PIT. VI
Central Valley spring-run Chinook Salmon (Feather River Hatchery)	Juvenile	2760**	1716*	Collect and Transport live animal	Hand and/or Dip Net	Anesthetize; Tissue Sample Fin or Opercle: Tag: Coded-Wire. PIT. VI

* Indirect Mortality total in this table reflects the total mortality of egg to adult or juvenile to adult. This includes. collection. transportation. pathology. and natural mortality of fingerling to adult survival rates. Please see table 2 for further explanation.

**560 FRFH spring-run Chinook salmon eggs and juveniles during the first three years of the permit annually – and 2.760 eggs or juveniles in the fourth and fifth years.

Table 2. Donor Stock Collection Mortality Rates Associated with Permit 14868

Source	Lifestage	Number collected	Collection method	Reason for loss	Expected mortality-based in percent	Number of fish lost/taken	References	Number remaining
FRFH	Egg	Max 560 (years 1-3) or 2,760 (years 4-5) for SCARF	Surplus eggs from FRFH	Collections of eggs from FRFH	N/A	N/A	Losses would be associated with existing operations under FRFH HGMP	560 (year 1-3) 2,760 (year 4-5)
				Transport (to quarantine and from quarantine)	1%	5.6 (year 1-3) 27.6 (year 4-5)	Schreck et al. 2006	554.4 (year 1-3) 2,732.4 (year 4-5)
				Eyed to fingerling	32%	177.4 (year 1-3) 874.4 (year 4-5)	Cavallo et al. 2009	377 (year 1-3) 1,858 (year 4-5)
				Pathology	100% of the 60 fish required for pathology	60	AFS-FHS 2010	317 (year 1-3) 1,798 (year 4-5)
				Fingerling to smolt in Interim Facility/SCARF	22%	69.7 (year 1-3) 395.6 (year 4-5)	Cavallo et al. 2009	247.3 (year 1-3) 1,402.4 (year 4-5)
				Smolt to adult in Interim Facility/SCARF	50%	123.6 (year 1-3) 701.2 (year 4-5)	Pollard and Flagg 2004	123.6 (year 1-3) 701.2 (year 4-5)
FRFH	Juveniles	Max 560 (years 1-3) or 2,760 (years 4-5) for SCARF	Surplus juveniles from FRFH	Collections of juveniles	N/A	N/A	Losses would be associated with existing operations under FRFH HGMP	560 (year 1-3) 2,760 (year 4-5)
				Transport (to quarantine and from quarantine)	1%	5.6 (year 1-3) 27.6 (year 4-5)	Schreck et al. 2006	554.4 (year 1-3) 2,732.4 (year 4-5)
				Pathology	100% of the 60 fish required for pathology	60	AFS-FHS 2010: per comm. Mark Adkinson	494.4 (year 1-3) 2,672.4 (year 4-5)
				Fingerling to smolt in Interim Facility/SCARF	22%	108.8 (year 1-3) 587.9 (year 4-5)	Cavallo et al. 2009	385.6 (year 1-3) 2,084.5 (year 4-5)
				Smolt to adult in Interim Facility/SCARF	50%	192.8 (year 1-3) 1042.2 (year 4-5)	Pollard and Flagg 2004	192.8 (year 1-3) 1042.2 (year 4-5)

Table 3. Production Estimates for the Interim Facility and SCARF between 2012-2016 for the San Joaquin River Restoration Program Associated with Permit 14868

1	2	3	4	5
Calendar Year	Maximum Egg Take from Feather River Hatchery	Number of Adult Spawning Pairs (Sept/Oct of each Year)	Number of Eggs Produced from Adult Pairs	Estimated Number of Smolts Produced (Spring)**
2012	560	0	0	0
2013	560	0	0	0
2014	560	0	0	0
2015	2760	50-100	100,000 - 490,000	0
2016	2760	50-100	100,000 - 490,000	75,000 - 367,500

* Based on an estimated fecundity of 2000-4900 per female spawned.

** Based on an estimated survival 75 percent.

B. Notification Requirements and Operational Reports

National Marine Fisheries Service Contact:
Elif Fehm-Sullivan
National Marine Fisheries Service
Central Valley Office
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814
(916) 930-3723
(916) 930-3629 (FAX)
Elif.Fehm-Sullivan@noaa.gov

1. Notification of Field Activities: The permit holder shall notify the above contact, via phone, facsimile, or e-mail, at least two weeks in advance of initiating research activities for each reporting period (January 1 through December 31). The required notification shall include: start date(s), location(s), a description of the research projects that will be conducted, a description of the research methods to be utilized, the estimated number of ESA-listed spring-run that will be taken during the research project, projected end date(s), and the names and affiliations of all personnel who will operate under the permit who are not included as an investigator. The permit holder will also notify the above contact of any other research or monitoring activities occurring in the locations of the permit holder's activities.

2. Exceeding Authorized Take: The permit holder is not exempt from the ESA section 9 take prohibition for any additional take above that authorized, including mortalities. In the event that the authorized level of take, including mortalities, is exceeded, the permit holder shall notify, via phone, facsimile, or e-mail, the above contact as soon as possible, but no later than two calendar days after the unauthorized take. In the notification, the permit holder shall explain to the above contact the circumstances of the unauthorized take, if the unauthorized take included mortalities, or if the take occurred in a manner not authorized by Permit 14868. The notification shall also include a re-evaluation of the techniques that were used, or an explanation as to why permitted sampling techniques were not at fault for exceeding take. NMFS may evaluate the research project to determine if techniques need to be revised accordingly to prevent additional take. Pending review of these circumstances, NMFS may suspend research activities or amend this permit in order to allow research activities to continue.

3. Taking of Unauthorized ESA-listed Species: In the event any ESA-listed species not included in this permit, or covered by another permit or exemption, is taken during the course of research activities, the permit holder shall notify, via phone or facsimile, the above contact as soon as possible, but not later than two calendar days after the event. In the notification, the permit holder shall explain the circumstances of the unauthorized take. Pending review of these circumstances, NMFS may suspend research activities or amend this permit in order to allow research activities to continue.

4. Taking of Marine Mammals: In the event any marine mammal is taken during the course of research activities, the permit holder shall notify the above contact by phone, facsimile, or e-mail as soon as possible, but no later than two calendar days after the event. The permit holder shall then submit a written report to the above contact, describing the circumstances of the unauthorized take. Pending review of these circumstances, NMFS may suspend research activities or amend this permit in order to allow research activities to continue.

C. Permit Reporting and Reauthorization Requirements

National Marine Fisheries Service Contact:
Elif Fehm-Sullivan
National Marine Fisheries Service
Central Valley Office
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814
(916) 930-3723
(916) 930-3629 (FAX)
Elif.Fehm-Sullivan@noaa.gov

Monthly Report(s): Reports shall be submitted monthly when fish are transported and/or reared in the Quarantine, Interim and Conservation facilities.

Monthly Reports shall include:

a. Number of live spring-run Chinook salmon transported by brood year and associated mortalities, if applicable.

b. Number of live spring-run Chinook salmon being reared at each facility by brood year and tank(s).

c. Number of mortality of spring-run Chinook salmon being reared at each facility by brood year and tank(s) with reasons for mortalities.

d. Daily rations by brood year and tank(s).

e. Information fish length and weight when available from broodstock inventories.

f. Other pertinent information as needed.

Annual Report(s): The authorization of this permit is contingent upon receipt of annual reports. Annual reports must be submitted online at the *Applications and Permits for Protected Species* (APPS) website, https://apps.nmfs.noaa.gov. Once an annual report is submitted to NMFS, the permit holder may continue permitted research activities unless otherwise notified by NMFS. NMFS will notify the permit holder if the annual report is inadequate and more information is required. If information is requested but not supplied, this 10(a)(1)(A) permit may be suspended until the NMFS request is met.

Annual Reports shall include:

a. Describe any problems and/or any unforeseen effects and any steps taken (or proposed) to resolve such problems.

b. Describe what measures were taken to minimize the permitted activities' effects on animals and the effectiveness of these measures.

c. If animals were unintentionally injured or killed, describe the circumstances. Describe how they were disposed of if it wasn't in the way described in the authorization/permit.

d. Describe the physical condition of animals taken and used in the permitted activities.

e. Describe the effects permitted activities had on animals, including any unforeseen responses or effects.

f. If applicable, describe the method used to estimate take if it differed from your proposed method.

g. State what steps were taken to coordinate the permitted activities with other permit holders.

h. If you do not have an electronic version logbook, please submit a hard copy to the address above or send it to the fax number above (please include your permit number on all pages).

i. Summarize any preliminary findings.

j. List titles of reports or publications resulting from this reporting period.

k. Provide any additional findings, results, or information you would like to report or comment on.

Final Report: The permit holder shall submit a final report on the APPS website https://apps.nmfs.noaa.gov within ninety (90) days of the expiration of this permit summarizing the results of the research and the success of the research relative to its goals.

D. Special Conditions

1. NMFS will monitor research activities to ensure that the research is operating satisfactorily in accordance with Permit 14868. NMFS will monitor the actual annual take of ESA-listed spring-run associated with the proposed research activities (as provided in annual reports or by other means). Authorized take may be reduced if population data indicate that the take associated with Permit 14868, or cumulative take authorizations for the spring-run, exceeds that which NMFS determines is acceptable.

2. Researchers shall use dip-nets with knotless nylon mesh to minimize scale and mucus abrasion and shall select the smallest mesh-size dip-net that is appropriate to achieve sampling objectives while reducing the probability that smaller fish will become gilled in

the net.

3. Spring-run will be handled with extreme care and kept in water to the maximum extent possible during sampling and processing procedures. Adequate circulation and replenishment of water in holding units is required.

4. Spring-run will not be handled if water temperatures at the capture site exceed 21 degrees Celsius. Under these conditions, fish shall not be collected.

5. When using sedation (tricaine methanesulfonate (MS-222) or Alka-Seltzer® Gold, extreme care shall be taken to use the minimum amount of substance necessary to immobilize ESA-listed spring-run for handling and sampling procedures. It is the responsibility of the researcher to determine when sedation is necessary to reduce injuries to ESA-listed spring-run during handling and sampling activities.

6. FWS will transport spring-run Chinook salmon in a manner that minimizes fluctuations in water quality and the effects of handing and stress. The holding water will be monitored at all times, and requires enriched dissolved oxygen levels to be at or near saturation and water temperature may not vary more than two degrees Celsius (+ or -) during holding and/or transport.

7. Any juveniles requiring transport between facilities will be moved utilizing a 500-gallon transport tank and trailer. The tank will be filled with water from the FRFH (for transport from FRFH to Silverado, or CABA) or from Silverado/CABA (for transport from Silverado/CABA to the SCARF) just prior to transport. Transport times will depend on the location, but may not exceed 4 hours. Before transferring fish, the water will be tempered to within two degrees Celsius of the water temperature at the receiving facility.

8. All ESA-listed Central Valley salmonids tissue samples will be preserved as voucher specimens and sent to: Dr. Robert Titus, California Department of Fish and Game, Tissue Archive Lab, 1875 Alpine Avenue Suite F, Sacramento, California 95814, (916) 227-6844.

9. All eggs destined for the quarantine facility will be transported when the eggs are the most shock resistant. All eggs transported to the quarantine facility will be hatched and transported to the SCARF as fry or juveniles.

10. Eggs will be placed in a specialized shipping container (*e.g.* Styrofoam cooler) to reduce excessive movement and limit damage to the egg membrane. Eggs will be segregated in wet cheesecloth and securely tied, then placed in the shipping container, kept cool and moist using non-chlorinated ice, and transported in a dark environment. Ice will be in a separate compartment of the shipping container, so as not to be in direct contact with the eggs. The ideal temperature for transport is between 5 – 10 degrees Celsius. A standard vehicle will be used to transport eggs.

11. Individuals will be randomly selected from preferred crosses/trays for broodstock.

Corresponding individual fish data will be collected for each cross; including Hallprint tag number, adipose fin status, head tag number, CWT number, gender, weight, fork length, ovarian fluid sample number, tissue sample number and corresponding genetic analysis data. These data will be used to select preferred crosses for the SJRRP guided by the following criteria:

a. Disease Status - Parents of juveniles test negative for major virulent pathogens and in particular, Infectious Hematopoietic Necrosis Virus (IHNV) and Bacterial Kidney Disease (BKD).
b. Genetic Variability – The collections accurately represent the genetic diversity of the donor population. Siblings should comprise less than 2 percent of the total collection [base on the goal of 50 crosses from unrelated individuals (i.e. non-siblings)].
c. Run Timing – preferably two-generations of spring-run phenotype are identified using CWT data, parentage based tagging (PBT) or otolith microchemistry. Generation-one will be the spawning adults (i.e. parents of the eggs), and generation-two will be the parents of the spawning adults (i.e. grandparents of the eggs).
d. Age of Maturing – Two year old males and females (based on length data) will comprise less than 5 percent of the parental crosses.

12. Intentional lethal take under Permit 14868 is only authorized for the 60 individuals that will be used for pathogen testing purposes; all other intentional lethal take is not authorized.

13. Fish health must be monitored by California Department of Fish and Game (CDFG) pathologists. Treatment methods prescribed by fish pathologists for disease outbreaks and treatment protocols will be carried out by hatchery staff. Depending on the nature of an outbreak, treatment methods may vary. However, chemical treatments for external pathogens can include the use of salt, $KMnO_4$, formalin or hydrogen peroxide (as allowed by the hatchery discharge permit). Bacterial infections could include the use of oxytetracycline, florfenicol or other approved antibiotic.

14. All treatments for disease outbreaks will follow veterinary guidance and will be used and monitored according to The National Pollutant Discharge Elimination System wastewater discharge requirements. Diagnostic procedures for pathogen detection will follow American Fisheries Society professional standards, as described in the American Fisheries Society Bluebook.

15. SCARF Program will institute natural rearing techniques to provide the most promise for increasing the reproductive fitness of fish for the SJRRP. The methods to be employed include the following:
    a. Promote development of body camouflage coloration in juvenile fish by creating more natural environments in hatchery rearing vessels, for example, overhead cover, and in-stream structures and substrates.
    b. Condition young fish to orient to the bottom rather than the surface of the rearing vessel by using appropriately positioned feed delivery systems.

c. Exercise young fish by altering water-flow velocities in rearing vessels to enhance their ability to escape predators (the ability to adjust water velocities to target optimal swimming speeds for salmonids has been shown to improve growth rates, feed efficiency, oxygen utilization, swimming performance and stamina, and to reduce aggression).

16. All individual broodstock reared at the SCARF will be tagged using PIT tags and Visual Implant (VI) tags after reaching a minimum length of 55 millimeters (mm). All fish that are subjected to tagging will be thoroughly sedated using MS-222 or Alka-Seltzer®, which will expedite tag insertion and reduce the probability of injury to the fish. Sterilized PIT tags will be injected into the peritoneum using an implant gun or syringe-style implanter. PIT tags will be used for monitoring individual fish throughout captivity. Sterilized VI tags will be inserted into the clear tissue behind the eye using a sterilized syringe. VI tags will be used as a "duplicate" tag, since fish may expel PIT tags.

17. Prior to spawning, adult fish will be tagged intra-muscularly with Petersen disc tags for easy visual identification. The tag will consist of two plastic buttons that are held to the sides of the fish by a stainless steel pin passed through the muscle tissue beneath the dorsal fin. The discs will be colored or marked with letters or numbers. Adult fish will be sedated during all tagging activities using MS-222, CO_2, or Tricaine-S. The dosage of the anesthetics will be adjusted to avoid fish mortality.

18. All hatchery juveniles produced will be adipose fin clipped and CWT. Coded wire tags are small (less than 1 mm) lengths of wire implanted into the snout of each juvenile fish using specialized automated equipment. The tags (visually indicated by the removed adipose fin) will allow fish to be identified as belonging to a particular SCARF cohort when it is either captured as an adult (commercial or sport fishery harvest), or when it returns to the San Joaquin River to spawn and the carcass is recovered. Some adipose fin clips will be used for additional genetic analysis.

19. Consistent with the requirements of the Settlement Act, spring-run Chinook salmon will not be released into the San Joaquin River until and the fish are designated as an experimental population under section 10(j) of the ESA.

20. The Interim Facility and SCARF will be integrated into the Emergency Action Plan of San Joaquin River Fish Hatchery and the Friant Fishwater Release Hydroelectric Project (FERC Project No 11068-CA). The Interim Facility and SCARF will be designed to minimize unintended releases to the San Joaquin River during flood events by installing screens on tanks. In the event that an emergency release is necessary due to flooding or other reason, fish will be loaded into fish transport tanks, transported to the river at an appropriate location and released according to State and Federal rules and requirements.

21. If a 10(j) experimental population is not designated by the time of the termination of this permit, FWS must work with NMFS to develop a suitable plan for the disposition of the fish rearing and being held at the Interim Facility or SCARF.

E. General Conditions

1. The permit holder shall ensure that ESA-listed spring-run Chinook salmon are taken only by the means, in the areas, and for the purposes set forth in the permit application, as limited by the special conditions in this permit.

2. Should NMFS determine that a sampling procedure provided for under this permit is no longer acceptable, the permit holder shall immediately cease using such procedure until an acceptable procedure has been prescribed by NMFS.

3. The permit holder, in effecting the take authorized by this permit, is considered to have accepted the conditions of this permit and shall be prepared to comply with the provisions of this permit, the applicable regulations, and the ESA.

4. The permit holder is responsible for the actions of any individual operating under the authority of this permit.

5. The permit holder, personnel, or designated agent acting on the permit holder's behalf, shall possess a copy of this permit when conducting the activities for which take of ESA-listed spring-run is authorized herein.

6. The permit holder may not transfer or assign this permit to any other person(s), as person is defined in section 3(12) of the ESA. This permit ceases to be in force or effective if transferred or assigned to any other person without prior authorization from NMFS.

7. 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.

8. Any personnel operating under Permit 14868 that require Federal or State licenses to practice their profession shall be duly licensed under the appropriate law.

9. The permit holder shall coordinate with other researchers to ensure that unnecessary research duplication and/or adverse cumulative effects to ESA-listed spring-run shall not occur as a result of the permit holder's activities.

10. The permit holder shall allow any NMFS employee(s), or any other person(s) duly designated by NMFS, to accompany field personnel during the activities provided for in this permit and/or to inspect the permit holder's records and facilities if such records and facilities pertain to activities for which take of ESA-listed spring-run is authorized by this permit, relate to ESA-listed spring-run, or otherwise pertain to NMFS' responsibilities under the ESA.

11. Under the terms of the regulations, a violation of any of the conditions of this permit will subject the permit holder, and/or any individual who is operating under the authority of this permit, to penalties as provided for in the ESA.

12. The provisions of this permit may be amended by the NMFS, Office of Protected Resources, upon reasonable notice to the permit holder.

13. 50 CFR section 222.23(d)(8) provides for a reasonable fee to be charged to cover the costs of the issuance of permits under the ESA. The fee for this permit has been waived.

14. This permit may be revoked by NMFS if the activities authorized by this permit are not carried out, if the activities are not carried out in accordance with the conditions of the permit and the purposes and requirements of the ESA and its implementing regulations, or if NMFS otherwise determines that the findings made under section 10(d) of the ESA no longer hold.

15. Any falsification of annual reports or records pertaining to this permit is a violation of this permit.

16. The permit holder, in signing this permit, has accepted and will comply with the provisions of this permit, applicable regulations (50 CFR 222), and the ESA.

F. Penalties and Permit Sanctions

1. Any person who violates any provision of this permit is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the ESA and 15 CFR part 904.

2. All permits are subject to suspension, revocation, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR part 904.

Kevin C. Lin

10/11/12

for Rodney R. McInnis
Regional Administrator
Southwest Region
National Marine Fisheries Service

Date

Robert Clark
Assistant Regional Director
U.S. Fish and Wildlife Service

Date

F. Penalties and Permit Sanctions

1. Any person who violates any provision of this permit is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the ESA and 15 CFR part 904.

2. All permits are subject to suspension, revocation, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR part 904.

Kevin Chin — 10/11/12

for Rodney R. McInnis
Regional Administrator
Southwest Region
National Marine Fisheries Service

Date

Robert Clark
Assistant Regional Director
U.S. Fish and Wildlife Service

Date

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Kevin Chin — 10/11/12

for Rodney R. McInnis
Regional Administrator
Southwest Region
National Marine Fisheries Service

Date

Robert C Clark, Acting — 10/22/12

Robert Clark
Assistant Regional Director
U.S. Fish and Wildlife Service

Date