



DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RTID 0648-XA873

Endangered and Threatened Species; Take of Anadromous Fish

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice, receipt of 17 application permit renewals, 2 permit modifications, and 6 new permits.

SUMMARY: Notice is hereby given that NMFS has received 25 scientific research permit application requests relating to Pacific salmon, steelhead, green sturgeon, rockfish, and eulachon. The proposed research is intended to increase knowledge of species listed under the Endangered Species Act (ESA) and to help guide management and conservation efforts. The applications may be viewed online at:

https://apps.nmfs.noaa.gov/preview/preview_open_for_comment.cfm.

DATES: Comments or requests for a public hearing on the applications must be received at the appropriate address or fax number (see **ADDRESSES**) no later than 5 p.m. Pacific standard time on [*insert date 30 days after date of publication in the **FEDERAL REGISTER***].

ADDRESSES: Because all West Coast NMFS offices are currently closed, all written comments on the applications should be sent to by e-mail to nmfs.wcr-apps@noaa.gov (please include the permit number in the subject line of the email).

FOR FURTHER INFORMATION CONTACT: Rob Clapp, Portland, OR (ph.: 503-231-2314, fax: 503-230-5441, e-mail: Robert.Clapp@noaa.gov). Permit application instructions are available from the address above, or online at <https://apps.nmfs.noaa.gov>.

SUPPLEMENTARY INFORMATION:

Species Covered in This Notice

Chinook salmon (*Oncorhynchus tshawytscha*): Threatened Lower Columbia River (LCR); threatened Puget Sound (PS); threatened Snake River (SnkR) spring/summer-run; threatened SnkR fall-run; endangered Upper Columbia River (UCR) spring-run; threatened Upper Willamette River (UWR), threatened Central Valley spring-run (CVS); endangered Sacramento River (SacR) winter-run; threatened California Coastal (CC).

Steelhead (*O. mykiss*): Threatened LCR; threatened Middle Columbia River (MCR); threatened PS; threatened SnkR; threatened UCR; threatened UWR; threatened Northern California (NC); threatened Central California Coast (CCC); threatened California Central Valley (CCV); threatened South-Central California Coast (S-CCC); endangered Southern California (SC).

Chum salmon (*O. keta*): Threatened Hood Canal Summer-run (HCS), threatened Columbia River (CR).

Coho salmon (*O. kisutch*): Threatened LCR; threatened Oregon Coast (OC) coho; threatened Southern Oregon/Northern California Coast (SONCC), endangered Central California Coast (CCC).

Sockeye salmon (*O. nerka*): Endangered SnkR.

Eulachon (*Thaleichthys pacificus*): Threatened southern (S).

Green sturgeon (*Acipenser medirostris*): Threatened southern Distinct Population Segment (SDPS).

Rockfish (*Sebastes spp.*): Endangered Puget Sound/Georgia Basin (PS/GB) bocaccio (*Sebastes paucispinis*); threatened PS/GB yelloweye rockfish (*S. ruberrimus*).

Background

1415-5R

The U.S. Fish and Wildlife Service's Red Bluff Office is seeking to renew a permit that allows them to annually take juvenile and adult SacR winter-run and CVS

Chinook salmon, adult and juvenile CCV steelhead, and egg, larval, and juvenile SDPS green sturgeon in the Sacramento River and in Clear and Battle Creeks in the Central Valley, California. This permit renewal would cover nine research projects carried out by the U.S. Fish and Wildlife Service Red Bluff office. The names and purposes of the nine studies are: (1) Battle Creek Fish Community Structure Evaluation (Pre/Post-Restoration)—the primary goal of this study is to assess how fish community distribution changes in response to the restoration project. (2) Battle Creek Juvenile Salmonid Monitoring Project—the goal is to monitor annual juvenile production and develop production indices, assess restoration efforts, and gather information on the history and migration of juvenile salmonids. (3) Battle Creek Adult Salmonid Monitoring Project—the purpose is to monitor escapement, migration timing, and population distribution of adult spring run and steelhead. (4) Battle Creek emergence trapping—the purpose is to monitor fry emergence in conjunction with the Battle Creek winter-run Jumpstart Project and Reintroduction Program efforts. (5) Clear Creek Juvenile Salmonid Monitoring Project—the purpose is to monitor juvenile Chinook and steelhead production, size, condition, and environmental data with the goal of information restoration actions in Clear Creek. (6) Clear Creek Fish Restoration Program Monitoring—the purpose is to monitor restored stream channel form and function (*i.e.*, improved water quality and quantity, reduced sedimentation, etc.). (7) Sacramento River Juvenile Fish Monitoring at Red Bluff Diversion Dam (RBDD)—the primary objectives of this project are to (a) obtain juvenile winter Chinook production indices and to correlate these indices with estimated escapement from adult estimates provided by the winter Chinook carcass survey, (b) define seasonal and temporal patterns of abundance of winter, spring, fall and late-fall run Chinook salmon and steelhead trout passing the RBDD, and (c) obtain relative abundance information for green sturgeon and lamprey to monitor trends in abundance. (8) Life History Studies on the Sacramento River SDPS green sturgeon—the

goal is to identify spawning habitat and larval and monitor juvenile rearing and migration movements in the Sacramento River. (9) Sacramento River Winter Chinook Salmon Carcass Survey—the carcass survey would help managers estimate the annual abundance of winter Chinook salmon spawners. Estimates of abundance would be made for both hatchery- and natural-origin fish. The research, a whole, would benefit listed fish by adding greatly to a large number of datasets that managers use to help them survive and recover.

Under the various studies, juvenile salmon would be observed via snorkel surveys and captured using backpack electrofishing, rotary screw traps, emergence traps, trammel nets, and beach seines. In addition, juvenile salmon would be handled (anesthetized, weighed, measured, and checked for marks or tags), and released. A subsample of captured those fish may be anesthetized, tissue sampled and passive integrated transponder (PIT)-tagged prior to release. A small number of juvenile CVS Chinook and CCV steelhead (100 of each) would be sacrificed for otolith sampling and analysis. Adult salmon would be observed via snorkel surveys or spawning surveys and captured using beach seines and fish weirs. Tissues would be collected from any carcasses encountered during snorkel surveys. Juvenile green sturgeon would be captured (benthic trawls, trammel or gill nets), anesthetized, tissue sampled and tagged (PIT or acoustic). Larval green sturgeon would be captured using fyke nets. The same procedures described above would be performed on larvae captured with fyke nets (tagging would be dependent on size). Egg Mats would be used to sample green sturgeon larvae and eggs (eggs and larvae would be sacrificed). With the exception of the juvenile salmon otolith research (above), the researchers are not proposing to kill any of the fish being captured, but a small number of fish may be killed as an inadvertent result of these activities.

The Interagency Ecological Program (IEP) is a consortium of nine state and Federal agencies that work in partnership with non-governmental organizations to provide ecological information and scientific leadership in managing the San Francisco Bay-Delta estuary. The IEP is seeking to renew a permit that allows them to annually take adult and juvenile SacR winter-run and CVS Chinook salmon, CV and CCC steelhead, and SDPS green sturgeon in the San Francisco Bay-Delta Region, California. This permit renewal includes eleven projects.

The names and purposes of the 11 studies are: (1) The Adult Striped Bass Tagging Study—it is designed to quantify the population dynamics of Striped Bass (*Morone saxatilis*) in the San Francisco Estuary and thereby provide metrics to inform science-based resource management decisions. These metrics include relative and absolute abundance, harvest rate, mortality rate, individual growth rates, and large-scale movement/migration patterns. (2) The Fall Midwater Trawl Survey—the study is a fish monitoring survey that provides trends in abundance and distribution of pelagic fish in the upper San Francisco Estuary. (3) The adult Sturgeon Population Tagging Study is designed to quantify the population dynamics of white and green Sturgeon in the San Francisco Estuary and provide metrics to inform science-based resource management decisions. These metrics include relative and absolute abundance, harvest rates, mortality rates, and individual growth rates. (4) The Summer Tow-net Survey is a fish monitoring survey that provides trends in abundance and distribution of young pelagic fish in the upper San Francisco estuary. (5) The San Francisco Bay Study—its purpose is to determine the effects of freshwater outflow on the abundance and distribution of fish and mobile crustaceans in the San Francisco Estuary, primarily downstream of the Sacramento-San Joaquin Delta. (6) The 20-mm Survey is designed to monitor post-larval and juvenile Delta Smelt distribution and relative abundance throughout their historical spring range in the upper San Francisco estuary. (7) The Yolo Bypass Fish Monitoring

Program is a monitoring effort designed to help managers understand fish and invertebrate use in the Yolo Bypass seasonal floodplain/tidal slough habitat. (8) The Zooplankton Study—its purpose is to estimate the abundance of zooplankton taxa and thereby help managers assess trends in fish food resources from the eastern San Pablo Bay area through the eastern Sacramento-San Joaquin Delta and Suisun Marsh. The study is also intended to detect and monitor zooplankton recently introduced to the estuary and determine their effects on native species. (9) The Spring Kodiak Trawl Survey—its purpose is to determine the relative abundance and distribution of adult Delta Smelt in the San Francisco Bay area and identify the onset of spawning. (10) The Suisun Marsh Survey is designed to determine effects of the Suisun Marsh Salinity Control Gates operation (as well as other anthropogenic habitat changes) and monitor presence and abundance for juvenile striped bass, Chinook salmon, and other species of concern. (11) The Smelt Larva Survey is intended to provide near real-time distribution data for Longfin Smelt larvae in the upper San Francisco Estuary. The data generated from this study would be used to help improve the effectiveness of water operations, aquatic habitat restoration, and fish management practices. The research, as a whole, would benefit fish by adding greatly to the knowledge base that state, private, and Federal managers depend on to help them make decisions about the best ways in which resources can be allocated to help listed species recover.

Under the various projects juvenile salmon would be captured (via fyke nets, gill nets, midwater trawls, trammel nets, hoop nets, otter trawls, larval fish nets, zooplankton nets, Kodiak trawl nets, rotatory screw traps, and beach seine), handled, and released. A small subset of the juvenile fish would be captured, anesthetized, measured, weighed, tagged, tissue sampled, and released. Adult salmon would be captured (via fyke nets, midwater trawls, trammel nets, hoop nets, otter trawls, Kodiak trawl nets, and beach seines), handled, and released. A small subset of adult salmon would be captured,

anesthetized, measured, weighed, tagged, tissue sampled and released. Under three of the projects (Studies 5, 7, and 9) some adipose-clipped, artificially propagated juvenile spring- and winter-run Chinook salmon would intentionally be sacrificed to collect coded wire tags (the data from which would be used for management purposes). In addition, adult green sturgeon would be captured (fyke net, trammel net, midwater trawl, otter trawl), handled, and released. A subset of juvenile and adult greens sturgeon would be captured, anesthetized, measured, weighed, tagged, tissue sampled, and released. With the exception of the directed mortality of adipose-clipped juvenile salmon (above), the researchers are not proposing to kill any of the fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

13675-3R

The Fishery Foundation of California is seeking to renew a permit that currently allows them to annually take juvenile SacR winter-run and CVS Chinook salmon, juvenile CV steelhead, and juvenile SDPS green sturgeon in the Sacramento River, CA. Juvenile salmon and green sturgeon would be captured (via beach seines and fyke nets), handled, and released. The purpose of this research is to evaluate salmon presence and habitat in flood plain areas. The data generated from this research would benefit listed fish by helping managers design, implement, and manage riparian habitat sites along the Sacramento River for the purpose of helping anadromous salmonids recover. The researchers are not proposing to kill any of the fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

15486-3R

West Fork Environmental is seeking to renew a previously held permit that in its new iteration would allow them to capture and handle juvenile UCR Chinook salmon, LCR Chinook salmon, UWR Chinook salmon, SnkR spr/sum Chinook, SnkR fall Chinook, PS Chinook salmon, LCR coho salmon, OC coho salmon, UCR steelhead,

SnkR steelhead, MCR steelhead, LCR steelhead, UWR steelhead, and PS steelhead during the course of headwater stream surveys over wide parts of Oregon and Washington. The purpose of the research is to provide owners of industrial forest lands and state lands managers with accurate maps of where threatened and endangered salmonids are found. The work would benefit the salmon and steelhead by helping land managers plan and carry out their activities in ways that would have the smallest effect possible on the listed fish. The researchers would use backpack electrofishing equipment to capture the fish. After capture, the fish would be swiftly released without tagging or even handling more than is necessary to ensure that they have recovered from the effects of being captured. The West Fork Environmental researchers do not intend to kill any listed salmonids, but a small number may die as an unintended result of the activities.

15549-3R

The Columbia River Inter-Tribal Fish Commission (CRITFC) is seeking a 5-year permit to expand on and extend work previously conducted under other research permits (Permits 1532 and 15549-2R). The research would take place in Satus, Ahtanum, Naches, and Toppenish Creeks in Washington State. The researchers wish to take juvenile MCR steelhead during the course of research designed to determine the fishes' freshwater movements and examine how those movements are affected by the area's substantially altered hydrograph. They would also collect baseline information on stock status and yearly abundance and seek to determine whether repeat spawners from a kelt reconditioning program run by the Confederated Bands and Tribes of the Yakama Nation are successfully reproducing.

The fish would be captured (via screw traps and backpack electrofishing equipment) and then be anesthetized and measured. Some would be tissue-sampled for DNA and aging purposes and some would receive PIT tags. The information gathered would be used to determine the fishes' movements and abundance and monitor the

ongoing status of the various MCR steelhead populations in the Yakima River subbasin. The research would benefit the fish by helping managers determine the effectiveness of current recovery measures and design new ones where needed. The researchers do not plan to kill any of the fish being captured, but a few may die as an unintentional result of the research.

15611-3R

The Washington Department of Fish and Wildlife is seeking to renew a permit that allows it to take adult LCR Chinook salmon, LCR steelhead, LCR coho salmon, and CR chum salmon while operating a fish collection facility on the North Fork Toutle River in Washington State. The fish collection facility is located at river mile 47.5, approximately 1.3 miles (about 2.1 km) downstream from the Mount St. Helens Sediment Retention Structure. The purpose of the project is to trap and haul salmon and steelhead around the sediment retention structure. The Washington Department of Fish and Wildlife would also collect scientific information and tag a portion of the fish to monitor migration patterns and spawning success. The activities' primary benefit would be to allow listed salmon and steelhead to spawn in historically accessible habitat upstream of the sediment retention structure. Also, researchers would collect information that would increase our understanding of the various species' spawning habits. The Washington Department of Fish and Wildlife proposes to operate the trap several days a week during the species' upstream migration. Captured fish would be transported in a tanker truck and released upstream of the sediment retention structure. The Washington Department of Fish and Wildlife does not intend to kill any fish being captured but some may die as an unintentional result of the activities.

16274-2R

The Mendocino Redwood Company (MRC) is seeking to renew a permit that currently allows them to annually take adult and juvenile CCC Chinook, CCC steelhead,

SONCC coho, and CCC coho salmon in Mendocino and Northern Sonoma Counties on Mendocino Redwood Company lands. Adult fish would be observed and tissue samples would be collected from carcasses found during spawning surveys. Juvenile salmon would be observed via snorkel surveys and captured (via backpack electrofishing and screw traps), anesthetized, weighed, measured, and released. A small subset of juvenile fish would be captured, marked (dye, elastomer, or fin clip), PIT-tagged, tissue sampled, and released. The purpose of the research is to assess juvenile and adult distribution and population structure in streams on MRC's property. The data gathered in these studies would benefit listed fish by helping MRC better understand salmonid distribution, abundance, and habitat use in these areas—and thereby design and carry out their management activities in the most fish-friendly way possible. The researchers are not proposing to kill any of the fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

16290-4R

The Oregon Department of Fish and Wildlife (ODFW) is seeking to renew permit that allows it to take juvenile UWR Chinook salmon, UWR steelhead, LCR Chinook salmon, LCR steelhead, LCR coho salmon, and CR chum salmon while conducting research on the Oregon chub. The purpose of the research is to study the distribution, abundance, and factors limiting the recovery of Oregon chub. The Oregon chub is endemic to the Willamette Valley of Oregon and the habitats it depends on are important to salmonids. Research on the Oregon chub would benefit listed salmonids by helping managers recover habitats that the species share. The ODFW researchers would use boat electrofishing equipment, minnow traps, beach seines, dip nets, hoop nets, and fyke nets to capture juvenile fish. Once the fish are captured, they would swiftly be counted, allowed to recover, and then released back to the sites of their capture. Researchers would avoid contact with adult fish at all times. If listed salmonids are captured during

the research they would be released before processing any other fish. The researchers do not expect to kill any listed salmonids but a small number may die as an unintended result of the research activities.

17077-3R

The Center for Watershed Sciences at the University of California at Davis, is seeking to renew a permit that currently allows them to annually take adult and juvenile SacR winter-run and CVS Chinook salmon, CCV steelhead and SDPS green sturgeon in the Sacramento-San Joaquin Delta and Suisun Marsh in the Central Valley, CA. The project specifically targets splittail and other native minnow populations, however ESA-listed species may be taken as well. Juvenile fish would be captured (via otter trawling, beach seining, and electrofishing), handled and released. Adult fish would also be captured (via otter trawling, beach seining), handled, and released. The purpose of this project is to better understand how physical habitats, flow, and other factors interact to maintain assemblages of native and non-native aquatic species in the upper San Francisco estuary. This study would benefit listed fish by providing knowledge about food webs and the habitats that support them. It would improve our ability to create and restore additional habitat and help managers anticipate the effects of drought, climate change, sea level rise, increased temperatures, and changing hydrologic conditions. The researchers are not proposing to kill any of the fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

17219-3R

NMFS's Southwest Fisheries Science Center, Fisheries Ecology Division, is seeking to renew a permit that currently allows them to annually take juvenile and adult CCC, NC and S-CCC steelhead, and CCC and SONCC coho salmon in coastal streams throughout California. Juvenile fish would be captured (via screw trap, backpack electrofishing, beach seines, hook and line fishing, and hand- or dip nets), handled, and

released. A subset of the captured fish would be anesthetized, sampled (collection of scales, fin clips, or stomach contents), marked or tagged (using fin clips, PIT tags, pop-off satellite tags, acoustic tags, or radio tags), and released. In limited cases, some juvenile steelhead would be captured and euthanized for otolith and contaminant analysis. Adult steelhead and coho would be observed via spawning surveys, and tissue samples would be collected from carcasses found during those surveys. Adult steelhead would be captured (at fish ladders and by hook-and-line angling), tagged, tissue sampled, and released.

The purpose of this research is to support conservation and management of ESA-listed anadromous salmonids in California by directly addressing information needs that NMFS and other agencies identify for the benefit of the listed fish. This data collected would be used to elucidate population abundance and dynamics; evaluate factors affecting growth, survival, and life-histories; assess life-stage specific habitat use and movement; inform various types of models (*e.g.*, population, life-cycle, bioenergetics, and habitat-use models); determine genetic structure within populations; evaluate the effects how activities such as water management and habitat restoration affect populations; and develop improved sampling and monitoring methods. With the exception of a small number of juvenile steelhead that would be sacrificed for otolith and contaminant research (above), the researchers are not proposing to kill any of the fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

17351-2R

The Green Diamond Resource Company is seeking to renew a permit that currently allows them to annually take juvenile and adult CC Chinook, SONCC coho, and NC steelhead on Green Diamond lands in the Chetco, Smith, Lower Klamath, Mad-Redwood, and Lower Eel watersheds in Northern California. Adult salmon would be

observed during spawning surveys and tissue samples would be collected from carcasses found during those surveys. A small number of adult steelhead may also be captured during screw trapping. Juvenile salmon would be captured (via backpack electrofishing, snorkel surveys, and screw trapping), handled and released. A small subset of juvenile fish would be captured, anesthetized, marked, tagged, tissue sampled and released.

The purpose of this research is to determine fish presence and distribution, monitor timing and abundance of out-migrating salmon, determine population estimates of summer rearing juveniles, and determine habitat use and relative number of spawning adults. The data from this research would be used to benefit listed fish by helping Green Diamond Resource Company minimize the effects that timber harvest activities on their land may have. The researchers are not proposing to kill any of the fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

18696-5M

The Idaho Power company is seeking to modify a 5-year permit that currently allows them to annually capture juvenile and adult SnkR fall Chinook salmon, SnkR spr/sum Chinook salmon, SnkR steelhead, and SnkR sockeye salmon while studying juvenile white sturgeon in and near Lower Granite Reservoir on the Snake River. The permit would be modified by combining it with a similar permit that Idaho Power holds (19846) that currently allows it to take those same species while studying bull trout in much the same area. The total action area of the two permits combined would extend from the confluence of the Snake and Grande Ronde Rivers up to the first of the Hells Canyon Complex of dams. The researchers would use small-mesh gill nets, benthic otter trawls, and hook-and-line angling to capture the fish. The gill net fishing would take place at times (October and November) and in areas (the bottom of the reservoir) that have purposefully been chosen to have the least possible impact on listed fish. When the nets are pulled to the surface, listed species would immediately be released (including by

cutting the net, if necessary) and allowed to return to the reservoir. The d-ring fishing would take place in June and July, but the same restrictions (immediately releasing listed fish, etc.) would still apply. The same is true for the otter trawls that would take place solely in July and the angling that would be performed from December-March.

The research targets species that are not listed, but the research would benefit listed salmonids by generating information about the habitat conditions in the Snake River and by helping managers develop conservation plans for the species that inhabit it. The researchers are not proposing to kill any of the fish they capture, but a small number of individuals may be killed as an inadvertent result of the activities.

18908-2R

The Skagit Fisheries Enhancement Group (SFEG) is seeking to renew a permit that allows them to annually take juvenile PS Chinook salmon and PS steelhead while conducting research to monitor how fish use side-channel habitat in floodplain and tributaries of the Skagit River in Washington. Fish would be captured by beach seine, handled (weighed, measured, and checked for marks or tags), and released. The purpose of the research is to assess juvenile salmonid habitat use and relative abundance in off-channel areas and thereby help improve efforts to increase access to off-channel areas and enhance rearing habitat quality in those areas. The SFEG would use the data to identify sites in need of restoration, target enhancement efforts, confirm post-project effectiveness, and guide future projects so that ongoing work can focus on appropriate areas and help create conditions that provide high quality rearing habitat. The project also aims to educate the public on the importance of floodplain habitat restoration for juvenile salmonids, and would contribute data to other regional research projects currently evaluating the role of off-channel habitats in salmonid growth and development. The researchers are not proposing to kill any fish they capture, but a small number of juvenile salmon and steelhead may be killed as an inadvertent result of these activities.

NMFS's Southwest Fisheries Science Center is seeking to renew a permit that currently allows them to annually take listed salmonids while conducting research designed to: (1) Determine the inter-annual and seasonal variability in growth, feeding, and energy status among juvenile salmonids in the coastal ocean off northern and central California; (2) determine migration paths and spatial distribution among genetically distinct salmonid stocks during their early ocean residence; (3) characterize the biological and physical oceanographic features associated with juvenile salmon ocean habitat from the shore to the continental shelf break; (4) identify potential links between coastal geography, oceanographic features, and salmon distribution patterns; and (5) identify and test ecological indices for salmon survival. The renewed permit would allow the researchers to take juvenile and subadult CC Chinook, CVS Chinook, LCR Chinook, SacR winter-run Chinook, SnkR spr/sum Chinook, CCC coho, SONCC coho, CCV steelhead, CCC steelhead, and NC steelhead.

This research would benefit listed fish by informing comprehensive lifecycle models that incorporate both freshwater and marine conditions and seek to account for the relationship between the two habitats. The data would also be used to identify and predict sources of salmon mortality at sea and thereby help managers develop indices of salmonid survival in the marine environment. Listed fish would be captured primarily via surface trawling, however beach seining would be used occasionally as would hook-and-line microtrawling. Subadult salmonids (*i.e.*, fish larger than 250 mm) that survive capture would have fin tissue and scale samples taken, and then be released. During the trawling operations, any subadult salmonids that do not survive capture, and all juvenile salmonids (*i.e.*, fish larger than 80 mm but less than 250 mm) would be lethally sampled (sacrificed) in order to collect (1) otoliths for age and growth studies; (2) coded wire tags for origin and age of hatchery fish; (3) muscle tissue for stable isotopes and/or lipid

assays; (4) stomachs and contents for diet studies; and (5) other tissues including the heart, liver, intestines, pyloric caeca, and kidney for special studies upon request. For the other types of capture, some of the fish may be tissue sampled, tagged, and released (particularly adults), though some juveniles would still be lethally sampled for the reasons just described. In all cases, whenever a fish dies simply as a result of being captured, that fish would be used in place of an intentional mortality (that is, instead of a fish that would otherwise be sacrificed).

19738-2R

The Washington Department of Natural Resources (DNR) is seeking to renew a permit that allows them to annually take juvenile PS Chinook salmon and PS steelhead while conducting research in headwater streams on DNR-managed lands that drain into Puget Sound. Juvenile fish would be detected via backpack electrofishing encounters (considered a capture event for this method) and, if stunned, would be netted (dip net) and released in a low gradient stream segment or pool and allowed to recover. The purpose of this research is to determine fish presence in small streams on state-managed lands to ensure that those streams are appropriately typed, adequately protected with riparian management zones (RMZs), and adequately restored (*e.g.*, via removal of man-made structures that limit or restrict fish passage to upstream habitat). Data generated by this proposal would benefit listed fish by informing land management decision-making (*e.g.* RMZ width, culvert replacement/sizing), and it would also be submitted to DNR Forest Practices division to improve the existing stream type geographic information systems database. The researchers are not proposing to kill any fish captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

19741-2R

The Yakama Nation is seeking a 5-year permit to annually take juvenile, natural MCR steelhead during the course of a research project designed to assess their current

abundance in the Rock Creek watershed in south central Washington. Under the permit, the researchers would employ backpack electrofishing to capture a number of juvenile MCR steelhead. Some of those fish would be tagged with PIT-tags, and some would be tissue-sampled, but most would simply be handled and released. The researchers would work primarily in five reference areas (reaches) and they would use mark/recapture techniques to study juvenile development and movement in Rock Creek. They would also conduct some boat electrofishing in the inundated pool downstream from the research area in Rock Creek—primarily to look at predator abundance. In addition, the researchers would take tissue samples from dead adults during spawning ground surveys. The purpose of the research is to assess the current distribution and relative abundance of MCR steelhead in selected portions of Rock Creek. That information would be integrated with information being collected on other ecological parameters and the researchers would use that information as a whole to determine species status in the system and evaluate the effectiveness of several habitat restoration actions that have been going on there for a number of years. This research would benefit listed steelhead in that it would be used by fish managers such as the Rock Creek Subbasin Recovery Planning Group to prioritize to plan restoration, protection, and recovery actions for Rock Creek steelhead.

22482-2R

NMFS's Northwest Fisheries Science Center (NWFSC) is seeking to renew for 5 years a permit that currently allows them to take juvenile LCR, SnkR fall-run, UCR spring-run, and UWR Chinook salmon; CR chum salmon; LCR coho salmon; SnkR sockeye salmon; and LCR, MCR, SnkR basin, UCR, and UWR steelhead. The purpose of the study is to measure contaminant levels in resident sculpin in the lower Willamette River (Oregon) near a Superfund site with high levels of pollutants. The target species for sampling, prickly sculpin, is benthic-feeding and has a small home range, thus

contaminant analysis of its tissues reflects environmental conditions at a localized area. Listed salmonids could be unintentionally captured during sampling activities. The study results would support an ongoing Natural Resource Damage Assessment, the purpose of which is to document and quantify injuries to natural resources resulting from exposure to hazardous substances. The proposed research study would benefit listed species by improving managers' understanding of the extent of contamination in the studied habitats and informing habitat restoration activities.

The researchers propose to collect fish between river miles 2 and 11 of the Willamette River, and at appropriate reference sites nearby in the Lower Willamette River. The researchers would conduct sampling from August through October. The researchers would use vinyl-coated wire shrimp traps with 1.0 cm x 0.5 cm openings and baited with canned meat and bait scent. Any listed salmonids that are unintentionally captured would be transferred to buckets of aerated water, identified, counted, checked for fin clips, passive integrated transponder, and coded wire tags, and then swiftly released near the site of capture.

23029-2R

The NWFSC is seeking to renew a permit that allows them to annually take juvenile PS /GB bocaccio rockfish and yelloweye rockfish, juvenile PS steelhead, and juvenile and adult PS Chinook salmon and SDPS eulachon in several river estuaries and bays of South Puget Sound, Washington. Fish would be captured via beach seine or otter trawl, handled (identified, measured, checked for marks or tags), and released. The goal of this research is to sample juvenile English sole and juvenile starry flounder and use the study results to support an ongoing Natural Resource Damage Assessment—the purpose of which is to document and quantify injuries to natural resources resulting from exposure to hazardous substances. The proposed research study would benefit listed

species by improving managers' understanding of the extent of contamination in the studied habitats and helping inform habitat restoration activities.

The researchers are not targeting any ESA-listed fish for capture as part of this research, but juveniles and adults may be unintentionally captured. The work would benefit listed species by helping guide habitat restoration activities in the Puget Sound. The researchers are also not proposing to kill any ESA-listed fish, but a small number may be killed as an inadvertent result of these activities.

23649-2M

Mount Hood Environmental is seeking to modify a 5-year permit that currently allows them to annually take juvenile MCR steelhead from a non-essential experimental population (NEP) in the Crooked River (Deschutes River watershed) in central Oregon. They are seeking to modify the permit by slightly increasing the take they are allotted, and the reason for this request is that new information has come to light indicating that there may be more steelhead present in the action area than previously believed. The researchers would use backpack electrofishing units and screw traps to capture the fish, which would then be measured, weighed, checked for marks and tags, allowed to recover, and released back to the river. A subsample of the captured fish may also be tissue-sampled for genetic assays. The purpose of the research is to establish baseline population information (presence, abundance, density, etc.) on MCR steelhead and native redband trout in the vicinity of Bowman Dam, on the Crooked River.

As noted above, the MCR steelhead that currently occupy the action area are technically part of an NEP. Taking members of this population for scientific purposes is permitted by regulation at 50 CFR 223.301 but, for the sake of analysis, they are considered part of the listed MCR steelhead DPS. The reason for that is that the NEP will expire on January 15, 2025—at which point the population will simply be considered part of the MCR steelhead DPS (although it should be noted the NEP abundance is not

currently counted along with the rest of the DPS). The proposed work would benefit the species by helping managers maintain and operate Bowman Dam (and a possible new hydroelectric turbine proposed for construction there) in the most fish-friendly manner possible. The researchers do not intend to kill any of the fish being captured, but a small number may die as an unintended result of the activities

Permit 24151

The U.S. Forest Service is seeking a 5-year permit that would allow them to take juvenile OC coho salmon during the course of research intended to help managers understand how juvenile coho salmon continue to thrive in a coastal lake currently containing resident populations of trophy predatory fishes (Tahkenitch Lake, Oregon). The researchers would use beach seines, minnow traps, and backpack electrofishing to capture fish in the tributaries to the lake and boat seines, beach seines, and hook-and-line fishing with barbless hooks in the lake and along the lake margins. The purpose of the research is to document coho salmon habitat shifts (seasonal and otherwise) and determine when and where predation by bass is occurring. The captured fish would be sedated and then weighed and measured. The fish would then be allowed to recover and be released back to the sites of their capture. The proposed work would benefit the species by helping managers better understand species interaction in critical coastal lake habitat and thereby help them take measures to promote coho salmon recovery. The researchers do not intend to kill any of the fish being captured, but a small number may die as an inadvertent result of the proposed activities.

24255

The California Department of Fish and Wildlife, Fish Restoration Program, is seeking a new 5-year permit that would allow them to annually take juvenile and adult SacR winter-run and CVS Chinook salmon, CCV steelhead, and SDPS green sturgeon in the Sacramento-San Joaquin Delta including Suisun Marsh and Grizzly Bay. Adult fish

would be captured (via otter trawl, lampara seine), handled, and released. Juvenile fish could be captured (via beach seine, otter trawl, lampara seine, zooplankton net, backpack electrofishing) handled, and released. The purpose of this research is to monitor food web dynamics and fish populations before and after restoration and among reference, restored, and pre-restoration sites. This data would be used to assess the effectiveness of habitat restoration with regard to native fish populations and would therefore benefit listed fish by helping improve such restoration activities. The researchers are not proposing to kill any of the fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

24367

NMFS's Northwest Fisheries Science Center is seeking a permit that would allow them to annually take juvenile PS Chinook salmon, PS steelhead, and HC summer-run chum salmon in nearshore areas of the San Juan Islands, Whidbey Island, and in the Central and Southern Puget Sound, Washington. Fish would be captured by lampara seines, handled (weighed, measured, and checked for marks or tags), and released. A subset of juvenile PS Chinook salmon and HC chum would be intentionally lethally taken (sacrificed) for stable isotope analysis. The purposes of the research are (1) to evaluate how shoreline restoration affects subtidal use of nearshore habitats by fishes—namely salmonids and forage fish, in Puget Sound; and (2) assess the role landscape context (particularly shoreline armoring) plays in influencing these relationships. Data would be used to establish relationships between nearshore subtidal fish abundance and the degree of shoreline development, and fish habitat use data would be incorporated into the existing Beach Strategies database to further inform restoration decisions (and thereby benefit the listed fish). The researchers are proposing to kill a small subset of juvenile ESA-listed PS Chinook salmon and Hood Canal chum salmon captured, and a small

number of juveniles of all species may be killed as an inadvertent result of sampling activities.

25409

Researchers from Oregon State University are seeking a 5-year permit that would allow them to document changes in fish community composition, macroinvertebrate community composition, and water quality that result from maintenance activities in agricultural channels. The project comes in response to Oregon State legislation (HB 2437 section 10), and is designed to help managers understand how cleaning and maintenance activities in agricultural ditches affect the ecosystems in those ditches. The researchers would capture fish by electrofishing, minnow traps, and seine nets in 50-meter, closed-off (with mesh block nets) channel sections. Minnow traps would be deployed the afternoon before the sampling day and be checked the following morning before the next capture method is deployed. Seine netting would be used when the site is safely accessible to capture animals that are not easily caught (too large) in minnow traps. Electrofishing would be used after both other methods are completed and would be conducted in a one-pass collecting event. Once collected, the fish would be housed in aerated containers, weighed, measured, and then released back to the sites of their capture. The research would benefit the listed species by helping managers understand how a common agricultural practices—ditch cleaning and maintenance—affects them and the habitats upon which they depend. The researchers do not intend to kill any of the fish being captured, but some may die as an inadvertent result of the activities.

25463

The Moss Landing Marine Lab is seeing a new 5-year permit that would allow them to annually take adult and juvenile SacR winter-run, CVS, and CC Chinook salmon; SONCC and CCC coho salmon; CCV, CCC, NC, S-CCC and SC steelhead; and SDPS steelhead throughout California. Fish would be captured (via electrofishing, hook-and-

line angling, otter trawls, cast nets, beach seines, gill nets, and minnow traps), handled, and released. The Moss Landing Marine Laboratories' Marine Pollution Studies Lab is a primary contributor to the California State Water Board's Surface Water Ambient Monitoring Program's Bioaccumulation Oversight Group. Results from these efforts in streams, rivers, lakes, reservoirs, bays, harbors, and coastal water bodies in California would be used to (1) measure contaminant levels in fish and shellfish over time to track temporal trends and evaluate the effectiveness of management efforts; (2) help managers evaluate contaminant spatial patterns; (3) perform Clean Water Act assessments; and (4) create and update human health advisories and assessments. Fish sampling would occur in California's anadromous and non-anadromous water bodies (streams, rivers, lakes, reservoirs, bays, harbors, and coastal) using various methods of take that would be variably employed to minimize risk to (non-targeted) listed species. Tissue samples would be analyzed for contaminants such as (but not limited to) mercury, metals, selenium, PCBs, legacy pesticides, and contaminants of emerging concern. The research would benefit listed fish by helping managers keep track of contaminants throughout the state and develop response plans accordingly. The researchers are not proposing to kill any of the listed fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

25466

Tim Salamunovich, Senior Fish Biologist for TRPA Fish Biologists, is seeing a new 5-year permit that would allow him to annually take juvenile and adult steelhead in Ulatis Project Flood Control channels in (mainly) channelized portions of Ulatis, New Alamo, Sweeney, Gibson, Canyon, Horse, and McCune creeks in the Lower Sacramento River, CA. Fish would be captured via backpack electrofishing, anesthetized, measured, weighed, tissue sampled, and released. The purpose of this research is to assess fish population responses to managed flows by collecting biological data (lengths, weights,

and counts) on the fish populations in order to monitor their distribution and diversity as well as their overall condition and health. The data from this research would be used to update information on the distribution, relative abundance, diversity, and health of fish in Ulatis Project stream channels and would therefore benefit the fish by helping managers operate the channels in as fish-friendly a manner as possible. The researchers are not proposing to kill any of the fish being captured, but a small number of juveniles may be killed as an inadvertent result of these activities.

Authority

Scientific research permits are issued in accordance with section 10(a)(1)(A) of the ESA (16 U.S.C. 1531 *et seq.*) and regulations governing listed fish and wildlife permits (50 CFR parts 222-226). NMFS issues permits based on findings that such permits: (1) are applied for in good faith; (2) if granted and exercised, would not operate to the disadvantage of the listed species that are the subject of the permit; and (3) are consistent with the purposes and policy of section 2 of the ESA. The authority to take listed species is subject to conditions set forth in the permits.

Anyone requesting a hearing on an application listed in this notice should set out the specific reasons why a hearing on that application would be appropriate (see **ADDRESSES**). Such hearings are held at the discretion of the Assistant Administrator for Fisheries, NMFS.

Applications Received

This notice is provided pursuant to section 10(c) of the ESA. NMFS will evaluate the applications, associated documents, and comments submitted to determine whether the applications meet the requirements of section 10(a) of the ESA and Federal regulations. The final permit decisions will not be made until after the end of the 30-day comment period. NMFS will publish notice of its final action in the **Federal Register**.

Dated: February 9, 2021.

Angela Somma,

Chief, Endangered Species Division,

Office of Protected Resources, National Marine Fisheries Service.

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