

(with some alteration in take numbers). They are: Study 1—Evaluation of Comparative Survival of In-river Passage and Multiple Bypassed Juvenile Salmon; Study 2—Evaluation of Delayed Mortality in the Near-ocean Environment Following Passage Through the Columbia river Hydropower System; Study 3—Evaluation of Survival and Adult Return Rate of Transported Juvenile Salmon Compared to In-river Migrating Fish; Study 4—Evaluation of Migration and Survival of Juvenile Salmonids Following Transportation. Under these studies, juvenile listed salmon would be variously (a) captured using lift nets or dipnets at the dams (or acquired from Columbia River Smolt Monitoring Program or NMFS personnel at Bonneville Dam), (b) sampled for biological information or tagged with radiotransmitters, and (c) released.

The research has many purposes and would benefit listed salmon and steelhead in different ways. In general, the purpose of the research is to compare biological and physiological indices of wild and hatchery juvenile fish exposed to stress during bypass, collection, and transportation activities at the dams. The research will benefit the listed species by helping determine what effects the dams and their associated structures and management activities have on the outmigrating salmonids and using that information modify those factors in ways that increase salmonid survival.

Permit 1379

The Columbia River Inter Tribal Fish Commission (CRITFC) is requesting a 5-year permit covering three study projects that, among them, would annually take adult and juvenile threatened SR fall chinook salmon; adult and juvenile threatened SR spring/summer chinook salmon (natural and artificially propagated); juvenile endangered UCR spring chinook salmon (natural and artificially propagated), adult threatened LCR chinook salmon; adult and juvenile endangered UCR steelhead (natural and artificially propagated); adult and juvenile threatened SR steelhead; and adult and juvenile endangered SR sockeye salmon at various points in the Columbia, Wenatchee, and Methow Rivers in Washington State. The research was originally conducted under Permit 1134, which was in place for 5 years (63 FR 30199) with one amendment (67 FR 43909); it expired on December 31, 2002. Over the years, there have been some changes in the research and they are reflected in this proposal (e.g., the aforementioned amendment and some

reallocation of research activities and their associated take to this and other permits), nonetheless, the proposed projects are largely continuations of ongoing research. They are: Project 1—Juvenile Upriver Bright Fall Chinook Sampling at the Hanford Reach (does not directly target a listed species but would indirectly take them); Project 2—Adult Chinook, Sockeye, and Coho Sampling at Bonneville Dam; and Project 3—Adult Sockeye Sampling at Tumwater Dam, Wenatchee River (does not directly target a listed species but would indirectly take them). Under these tasks, listed adult and juvenile salmon would be variously (a) captured (using seines, trawls, traps, hook-and-line angling equipment, and electrofishing equipment) and anesthetized; (b) sampled for biological information and tissue samples, (c) or tagged with radio transmitters or other identifiers, (e) and released.

The research has many purposes and would benefit listed salmon and steelhead in different ways. In general, the purpose of the research is to gain current information on the status and productivity of various fish populations, collect data on migratory and exploitation (harvest) patterns, and develop baseline information on various population and habitat parameters in order to guide salmonid restoration strategies all of which are of use on their own, but most of which are being done in accordance with specific requirements of the of the U.S. Canada Pacific Salmon Treaty. The research would continue to benefit listed fish by helping managers set in-river and ocean harvest regimes so that they have minimal impacts on listed populations, prioritize projects in a way that gives maximum benefit to listed species, and design strategies and activities to help recover them. The CRITFC does not intend to kill any of the fish being captured, but a small percentage may die as an unintended result of the research activities.

Permit 1382—Modification 1

The United States Geological Survey (USGS) is seeking a modification to Permit 1382 to take juvenile threatened MCR steelhead during the course of research designed to assess bull trout populations and life history and habitat characteristics in the Umatilla River, Oregon. Under permit 1382, the USGS is already conducting this type of research in the Wallawa River, Oregon. The researchers intend to use a variety of techniques to capture, mark, and monitor bull trout in the Umatilla River. The techniques that will affect MCR steelhead are snorkel surveys, backpack

electrofishing, seining, trap netting, minnow trapping, and screw trapping. During the snorkeling exercise, the fish will simply be observed. Any MCR steelhead captured during the other operations will be counted and immediately released downstream from their capture sites.

The purpose of the research is to tie fish and population health (for bull trout) to habitat quality and land use in the Umatilla subbasin and thus assist in the process of recovery planning. MCR steelhead will benefit from this research because many of the habitat features bull trout require are also important to steelhead and therefore any improvement in those features for the purposes of recovering bull trout will be of help to the local depressed steelhead populations as well. The researchers do not intend to kill any of the listed fish being captured, but a small percentage may die as an unintended result of the research activities.

Permit 1403

The NWFSC is requesting a 5-year permit to annually take juvenile threatened SR spring/summer chinook salmon (natural); juvenile threatened SR steelhead; and juvenile threatened MCR steelhead at various places in the Salmon River subbasin, Idaho, and the John Day River subbasin in Oregon. The research encompasses two studies: Assessment of Three Alternative Methods of Nutrient Enhancement (Salmon Carcasses, Carcass Analogues, and Nutrient Pellets) on Biological Communities in Columbia River Tributaries, and Utilization of Nutrients from Spawning Salmon by Juvenile Chinook Salmon and Steelhead in the Columbia and Snake River Basins. Under these studies, the fish would variously be (a) captured (using seines, nets, traps and, possibly, electrofishing equipment) and anesthetized; (b) measured and weighed; (c) held for a time in enclosures in the stream from which they are captured; and (d) released. Both projects call for some juvenile listed fish to be intentionally killed as part of the research. It is also likely that a small percentage of the fish being captured would unintentionally be killed during the process. In addition, tissue samples would be taken from adult carcasses found on streambanks.

The research has many purposes and would benefit listed salmon and steelhead in different ways. In general, the purpose of the research is to (a) learn how salmonids acquire nutrients from the bodies of dead spawners and test three methods of using those nutrients to increase growth and