Klamath Basin
Summary of Recent Federal Government Activities
March 2003

The Departments of the Interior, Commerce, and Agriculture are involved in a variety of activities throughout the Klamath River Basin. These activities span two states – Oregon and California – and focus on environmental, economic, and statutory concerns. This paper is a narrative summary of federal programs conducted and projects that have been undertaken over the past few years in the Klamath River Basin. The paper includes information from five bureaus within the Department of the Interior – the Fish and Wildlife Service (FWS), the Bureau of Reclamation (BOR), the Bureau of Land Management (BLM), the Bureau of Indian Affairs (BIA) and U.S. Geological Survey (USGS) – and Department of Commerce's National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). The Interior and Commerce programs focus on restoration of endangered fish and other trust resources and operations of the Klamath irrigation project. The paper also identifies Department of Agriculture programs that have similar objectives as well as meeting the needs of non-project farmers. All of the agencies have Indian trust responsibilities and are subject to the Endangered Species Act (ESA).

Water Resources

Water Bank

The 2002 Biological Opinion of NOAA Fisheries recommends that BOR establish a water bank of 50,000 acre-feet to meet minimum lake levels and supplement minimum river flows. BOR is providing $4 million for the Pilot Water Bank Program this year to pay irrigators to idle some of their cropland or have them use groundwater instead of project water to irrigate crops.

The Biological Opinion called for the water bank to obtain 30,000 acre-feet in 2002, 50,000 acre-feet in 2003, 75,000 acre-feet in 2004 and 100,000 acre-feet in 2005-2012. This year, BOR was originally seeking 12,000 acres of farmland to bank in the Klamath Reclamation Project, which would translate into about 30,000 acre-feet of water. That acreage was subsequently increased to 16,000 acres to allow greater participation. BOR is also seeking up to 25,000 acre-feet of groundwater to replace project water.

About 400 people turned out at the Klamath County Fairgrounds on March 3rd, to hear about the water bank and pick up applications. The farmers submitted applications for 24,000 acres for the water bank, offering to idle twice as many acres as the federal government had planned to set aside for this year.

Water Conservation

BOR has had a water conservation program for approximately 5 years. The program has funded water conservation studies in cooperation with irrigation districts and has implemented projects to improve irrigation efficiency, such as canal lining, replacing canals with piping, and adding flow measurement devices, among others.

Water Quality and Quantity

The Department is funding improvements in the quality and quantity of flows into Agency Lake through a pilot project with the Klamath Basin Rangeland Trust (KBRT). Initiated in the summer of 2002, KBRT was funded to lease water rights from 3,161 acres of irrigated pastureland on ranches in the southern portion of the Wood River Valley and to provide the leased water for instream flows and Agency Lake. As a result of the pilot project, no flood irrigation occurred on any of the participating properties. Drainage from these lands contributes to high phosphorus levels of water entering Agency Lake which fosters algal growth in both Agency and Upper Klamath Lakes. The algae deplete oxygen levels in the lakes to levels that can be lethal to fish, including the two endangered suckers. The pilot project includes funding for installation of riparian fences to keep cattle away from streams, and development of alternative stock-watering options on participating properties. In 2002, flows to Agency Lake from Crooked Creek were estimated to have increased when compared to when the water in this drainage was being used more extensively for irrigation. The pilot project includes extensive monitoring to assess the ecological effects of the project. The pilot project has been expanded to additional acreage and extended for the 2003 water year. The expansion includes lands in the Sevenmile Creek drainage which is expected to result in a significant increase in flows and improvement in water quality from that creek into Agency Lake.

BOR acquired the 7,159-acre Agency Lake Ranch in 1998, adjoining Wood River Ranch. The Department and others in the Basin are looking to utilize adjacent lands to increase storage. Such additional storage could help supplement and stabilize Klamath River flows.

USGS, in cooperation with Bureau of Reclamation and in consultation with Oregon Department of Environmental Quality (ODEQ), will be measuring sediment oxygen demand in the Klamath River just below Upper Klamath Lake. This stretch of the Klamath River is in violation of State water-quality standards for dissolved oxygen, and represents a risk to endangered suckers. Sediment oxygen demand data are needed to determine what management actions are appropriate to mitigate the situation.

The BLM restoration work on Wood River Cattle Ranch (discussed below) is improving the quality and quantity of water entering Upper Klamath Lake and is increasing wetland and riparian habitat for federally-listed fish and other wildlife species.

Land Management Practices

Wood River Wetland Management

BLM purchased the 3,200 acre Wood River Cattle Ranch in 1994 in cooperation with the American Lands Conservancy and BOR. BLM's management of the area reduced both the nutrient loading to Agency Lake and the lower Wood River and reduced irrigation water diversions from Wood River, increasing and improving fish and wildlife habitat for federally listed and other species. In addition, river channel restoration projects have reduced average stream temperature of water entering Agency Lake from the Wood River. USGS began working with BLM in 2003 on an investigation of how best to reincorporate these former wetlands back into the Upper Klamath Lake system. The study will initially focus on quantifying how nutrient loads from wetlands change with different management strategies.

Road Treatments

To improve riparian areas, fish passage, and water quality, BLM has removed seven miles of road in the upper Klamath basin, permanently closed four miles, seasonally closed 18 miles, and improved 11 miles of roads in the upper Klamath Basin. Additional cooperative projects to remove, improve, and close roads have occurred on private land.

In the Klamath, Six Rivers, and Shasta Trinity National Forests, the U.S. Forest Service conducts assessments and analyses and makes environmental improvement to its road systems, decommissions roads and storm-proofs roads at stream crossings. These efforts improve salmon and other fish habitat.

The Karuk Tribe has participated in the decommissioning of Steinicher Road, a forest road that was damaged by fill failure.

Culverts and Stream Crossings

Since 1998, BLM improved one stream crossing and removed two culverts on fish-bearing streams in the upper Klamath basin. These actions restore and improve access for special status fish to about eight miles of habitat.

The Forest Service continues to improve and restore access to fish habitat throughout the Klamath National Forest by reclaiming sediment dams and other obstacles that eliminate or pose threats to fish habitat.

Juniper Management Treatments

Since 1998, BLM completed more than 9,000 acres of juniper treatments to recover herbaceous plant communities that were degraded by juniper encroachment. Recovery of shrubs and grasses reduces erosion and sediment production. Juniper reduction also increases water availability for

nearby shrubs and grasses, possibly improving stream flow and water yield.

Range Management

Since 1998, BLM completed 27 Rangeland Health Standards Assessments (65%, or 133,877 acres of approximately 208,000 acres grazed). All of the assessments either found the water quality standard to be met, or if not met, prompted management changes or actions to ensure that they will be met. Management changes include grazing rotation, additional riparian fencing, and increased use supervision and monitoring.

Riparian Restoration

In addition to riparian restoration accomplishments at Wood River valley, BLM has an ongoing riparian restoration program of shading, streambank stability, and nutrient and sediment capture and road treatments to improve water quality. Since 1998, approximately 120 acres of forest within riparian reserves have been thinned to reduce fire risk and enhance the health of desired overstory trees. In addition, BLM removed 1,500 cubic feet of fine sediment from a quarry site within a riparian reserve and restored riparian areas subsequent to removing two culverts. These projects reduce bank erosion and improve stream shading.

Prescribed Fire Management

Since 1998, BLM completed over 31,000 acres of prescribed burns. These prescribed fires benefit water quality, streamflow, and understory vegetation conditions as they reduce the risk of catastrophic wildfire.

The Forest Service continues to reduce wildfire threats on highly erodable lands near fish habitat along the Klamath River and its tributaries.

Forest Management

Since 1998, BLM has treated 10,890 acres, making them more resistant to insects and disease and less susceptible to catastrophic wildfires. These treatments improve water quality and quantity by reducing runoff and erosion and encouraging groundwater recharge.
As mentioned above, the National Forests within the Klamath Basin – Klamath, Six Rivers, and Shasta-Trinity National Forests – have carried out a number of activities to improve its forest management practices.

Salmon Enhancement Programs

Trinity River Restoration Program

Under the authority of the 1984 Trinity River Fish and Wildlife Management Act, the Trinity River Task Force was convened to oversee the development of a program to restore fish populations on the Trinity River. In December 2000, the Secretary of the Interior signed the Record of Decision which outlines a plan to implement the recovery of the Trinity River and its fish and wildlife populations. The plan includes flow allocations, direct in-channel actions, as well as continued watershed restoration activities, replacement of bridges and structures in the floodplain, and monitoring and adaptive management. Federal agencies serve as members of the Trinity Management Council, which includes the State of California, tribes and Trinity County

Klamath River Basin Conservation Area Restoration Program

Congress authorized $1 million annually to implement this program. The Klamath River Basin Fisheries Task Force was established by the Klamath River Basin Fishery Resources Restoration Act of 1986 to provide recommendations to the Secretary of the Interior on the formulation, establishment, and implementation of a 20-year program to restore anadromous fish populations in the Klamath Basin to optimal levels. The 16-member Task Force includes representatives from the fishing community, county, state and federal agencies and tribes.

Federal Coho Salmon Recovery Planning

NOAA Fisheries initiated development of a recovery plan for Southern Oregon/Northern California Coasts (SONCC) coho in 2001. The SONCC Technical Recovery Team (TRT) is comprised of scientists from federal, state, tribal, academic, and local agencies/groups. During Phase I of recovery planning, the TRT has focused on developing delisting goals for the SONCC coho, identifying factors for the decline and factors limiting recovery of the species, identifying early actions that can be taken by co-managers to reduce impacts to the species and habitat, and identifying monitoring and evaluation needs for the species and habitat conditions.

State Coho Recovery Planning

A state-wide recovery team is addressing impacts throughout all California streams and rivers where coho are found. In addition, a special recovery team was formed within the Scott and Shasta Rivers, tributaries to the Klamath River, made up of mostly local land owners and state and federal representatives to address impacts associated with agricultural issues in these two sub-basins. Federal representatives are on both recovery teams. Each of the recovery teams are expected to develop voluntary conservation measures and identify necessary state regulatory changes for integration into a single state-wide coho recovery plan which is due to California Department of Fish and Game (CDFG) by July 2003. CDFG will then present final recommendations to the California Fish and Game Commission for final adoption in August 2003.

Pacific Fishery Management Council

Klamath River fall chinook salmon are one of the key stocks that NOAA Fisheries manages under the Pacific Coast Salmon Fishery Management Plan developed under the Magnuson Act. The Salmon Plan provides conservation objectives for Klamath fall chinook which the Pacific Fishery Management Council (PFMC) and NOAA Fisheries must achieve in developing and implementing annual ocean salmon management measures. NOAA Fisheries and FWS participate in the PFMC meetings that produce season options for public review and the final season recommendations for NOAA Fisheries. Federal representatives of the PFMC salmon technical team evaluates stock abundance projections and forecast the effects of proposed seasons on various salmon stocks, including Klamath fall chinook and coho.

Klamath Fishery Management Council

The Klamath Fishery Management Council (KFMC) is an 11-member federal advisory committee that provides recommendations to state and federal entities (including the PFMC, see above) responsible for managing Klamath Basin anadromous fish harvests. The KFMC's Technical Advisory Team develops annual Klamath River fall chinook stock projections, which are used by the PFMC, and maintains the model used to forecast ocean harvest.

Grant Programs

NOAA administers several grant programs to support restoration efforts in the Klamath River basin. In FY 2000-2002, NOAA Fisheries issued relatively large grants to the States of California and Oregon, and Klamath basin tribes (Yurok, Karuk, Hoopa and Klamath), through the Pacific Coastal Salmon Recovery Fund (PCSRF) for the purposes of restoring coastal salmonid habitat. Over this period, NOAA Fisheries issued grants of $41.1 million to California, $41.1 million to Oregon and nearly $3 million to Klamath basin tribes. NOAA's FY 2003 appropriation includes $14 million for each of California and Oregon's portion of the PCSRF funds. The States integrate these funds with their state salmon restoration funds and issue grants for habitat restoration, watershed planning, salmon enhancement, research and monitoring, and outreach and education. In 2001 and 2002, over $8 million in federal funds were allocated through this grant process to projects in the Klamath River basin. These projects include a wide range of activities from conservation easements; road inventory and restoration; fish passage improvements; public outreach; watershed planning, sediment source inventory and stabilization; fencing of riparian areas along streams; and species and habitat monitoring.

The Federal funds provided through the PCSRF have been instrumental in furthering conservation efforts in the Klamath River basin. These funds have been used successfully with state and local salmon recovery opportunities to provide a substantial increase in overall salmon recovery funding in the basin. Over 150 projects have been funded in the Klamath basin, as well as an additional 27 statewide projects that partially influence restoration in the basin. These projects included the removal of 67 fish barriers, installation of fish screens at 11 projects, the rehabilitation or decommissioning of at least 37 miles of forest roads, the restoration of 10 miles

of stream, the fencing and improvement of 4 miles of riparian zones, and prevention of 375,000 cubic yards of sediment from reaching stream channels. The funds also provided for 25 planning projects, 27 research and monitoring projects, and 22 outreach and education projects. Attached to this report is a listing of PCSRF expenditures on projects funded in the Klamath basin through FY 2002, a listing of statewide programs in California and Oregon related to the Klamath basin that were funded through the PCSRF, and a listing of projects approved by the State of California for the 2002/2003 grant funding cycle.

NOAA Fisheries also executed several interagency agreements (total~ $340,000) in the late 1990's with the U.S. Fish and Wildlife Service and Bureau of Indian Affairs to facilitate collection of salmon habitat utilization data and data on physical parameters of the Klamath River. In addition, NOAA Fisheries provided grants (total<$200,000) to the Yurok Tribe in the late 1990's to investigate the impact of sea lion predation on salmon and steelhead populations in the lower Klamath Basin. Also, under the authority of the Anadromous Fisheries Act, a grant is provided to California to help fund lower Klamath creel surveys to support fall Chinook harvest projections (see below) and California's steelhead recreational harvest management in the lower Klamath basin.

Steelhead Restoration and Monitoring Program

NOAA Fisheries entered into an Memorandum of Understanding with the State of California in 1998 to facilitate monitoring the status of steelhead trout populations in northern California, including the Klamath basin. NOAA Fisheries has provided funding and technical assistance to help guide and support this state program.

Juvenile Chinook Salmon

The USGS is working with the Yurok Tribe to assess the bioenergetics of juvenile chinook salmon in the Klamath River Estuary. A model is being developed that can be used to estimate the response of salmon to habitat conditions in the estuary.

Klamath Hydroelectric Project

The Federal Energy Regulatory Commission (FERC) license for PacifiCorp's Klamath Hydroelectric Project will expire in March 2006. The federal agencies are actively coordinating with PacifiCorp, state and federal resource agencies, tribes, and other stakeholder groups to address changes in the project that will help reduce project effects to native fish populations.

Fish and Wildlife Habitat Restoration

Sucker Recovery Action and Fish Screens

BOR has spent over $17 million on endangered sucker related recovery actions including spawning enhancement, fish screens and acquisition of Agency Lake Ranch. The A-Canal fish screen will be completed by April 2003 at a cost of about $12 million. Reclamation also installed fish screens at Agency Lake Ranch and Clear Lake. The 7,159 acre Agency Lake Ranch was purchased for $5 million in 1998 as off-stream storage for overall Project purposes, including environmental protection.

A Klamath Basin Fish Screen and Passage Program Investigations Study Report was completed in 2003 assessing future screen and passage priorities. BOR established a Fish Entrainment and Passage Working Group in 2002 to coordinate with other agencies. Reclamation is also leading an assessment of fish passage alternatives at Chiloquin Dam.

Chiloquin Dam

The Chiloquin Dam Passage Feasibility Study Act provided authority for federal funding for a study of the feasibility of providing adequate upstream and downstream passage for fish at the Chiloquin Dam including review of all alternatives for providing passage, determination of the most appropriate alternative and development of recommendations for implementing that alternative.

Ecosystem Restoration

All three FWS field offices in the basin – those in Klamath Falls, Yreka, and Arcata – have active programs for restoration of Klamath River basin wetlands and tributaries to the Klamath River and lands adjacent to Upper Klamath Lake and Agency Lake. Restoration projects included activities such as stream narrowing, streambank stabilization, and fencing cattle out of riparian zones. These projects are funded through the "Partners for Fish and Wildlife," " Jobs-in-the-Woods," and the coastal programs of FWS (see attachment 1).

In the Upper Klamath Basin, BOR funded 69 projects at a cost of $1.8 million from 1994-2001. BOR projects included riparian fencing, marsh restoration, erosion control, stream restoration, fish screens, restoration assessments and design, ground water studies, juniper removal, environmental education, and species monitoring.

Between 1994 - 2002, the BIA has funded seven watershed restoration projects on the Hoopa Valley Reservation at a cost of $1.7 million. The BIA funded five watershed projects on Karuk Tribal ancestral lands at a cost of $.7 million. Finally, BIA funded another 14 watershed restoration projects at a cost of $1.7 million on the Yurok Reservation (see attachment 2).

Tribal Participation in Trinity River Habitat Restoration

Since 1993, BOR has provided funding (approximately $12 Million) to the Hoopa Valley Tribe for habitat restoration activities in the Trinity River Basin. The Tribe continues to carry out hydrological monitoring of the Trinity this year (see attachment 3).

In 2003, BOR anticipates that it will provide the Yurok Tribe approximately $.85 million for a study of thermal refugia use by adult spring chinook salmon, radio tracking of yearling released coho salmon and steelhead, a survey of the mainstem Trinity River to document annual spring and fall-run Chinook salmon, and monitoring of Green sturgeon habitat utilization, among other projects (see attachment 4).

Research, Monitoring, and Assessment

Upper Klamath Groundwater Study

The U. S. Geological Survey (USGS) in coordination with the Oregon Water Resources Department (OWRD) and BOR is conducting a seven-year study (to be completed in FY 2005) to quantify the groundwater resources of the upper Klamath Basin. The study will help resource managers safely use groundwater to increase Klamath Basin water supplies by identifying appropriate pumping rates, ideal pumping locations, effective monitoring methods, and improving annual water supply forecasts. Funding for this project in 2003 was $500K ($250K from USGS, $250K from OWRD).

Agricultural Runoff

The USGS is monitoring temperature, dissolved oxygen, and other water quality factors related to fish habitat in the Lower Klamath Basin, and it the Tule Lake/Lower Klamath Lake areas. This work assist the state of California agencies in meeting Clean Water Act requirements for TMDL (Total Maximum Daily Load) designations for the Lower Klamath, Shasta, and Lost Rivers. Numerical modeling studies are being designed to study these data, and to develop a tool for managing these load levels.

Since 1994, BOR has funded the Klamath Tribes to monitor long-term nutrient loading in Upper Klamath Lake from tributaries and agricultural drainage. Funds are also used to maintain hatchery-reared endangered suckers for research efforts.

Endangered Suckers Studies

The USGS has been monitoring adult suckers in the Upper Klamath Lake since 1995. More recently, the USGS, in cooperation with the BOR, has expanded its biological research and is conducting two studies of the endangered suckers in Upper Klamath Lake. These studies include: (1) an analysis of the use and availability of water-quality refuges for adult suckers, which will provide needed insight as to what causes fish kills in Upper Klamath Lake, and how

they may be avoided; and (2) continued monitoring of suckers to determine status and trends of these endangered populations, which is essential for determining how these populations respond to various management actions, climatic conditions, and the large fish kills that occur periodically. In addition to the monitoring program, the USGS has been studying the habitats and habitat utilization of juvenile suckers since 2000 (through 2002). The USGS is investigating adult sucker movement behavior in relation to ambient water-quality conditions. This research was initiated with BOR support in 2002.

Since 1999, BOR, in conjunction with Oregon State University, has been evaluating larval and juvenile sucker habitat use, annual survival of larval and juvenile suckers, and the relative abundance and distribution of suckers in Keno Reservoir.

BOR completed a report in 2003 to determine the feasibility of oxygenating Upper Klamath Lake to reduce the risk of sucker die-offs related to low dissolved oxygen conditions. The report was a result of a series of workshops and meetings with various groups associated with Upper Klamath Lake. The report concluded that the proposed project did not demonstrate that it would provide much benefit to water-quality conditions in the lake.

Since 2002, BOR has funded studies to determine endangered sucker habitat conditions and presence below Clear Lake and Gerber Reservoir after irrigation deliveries are stopped in the fall. These studies assess habitat availability at different flow conditions.

Since 2002, BOR has also funded studies to determine how project operations affect sucker habitat in the Link River and Keno Reservoir. The studies relate fish movements to river flows and water quality conditions.

The degraded water quality of the Keno Reach has an adverse effect on the endangered Lost River and shortnose suckers, as well as other fish. Since FWS has responsibility to recover the Lost River and shortnose suckers and enhance habitat for other trust resources, it has researched the water quality problem, potential solutions, and identified additional data needed to aid decision making about how to best make improvements.

Thermal Refugia Study

Since 2002, BOR, in conjunction with the Yurok Tribe and others, has conducted a pilot study to determine thermal refuge conditions at the confluence of one tributary to the Klamath River and evaluate methods that can be applied to other thermal refuge areas.

Decision Support System for Klamath

USGS is developing software tools for a decision support system. The computer model simulates Upper Klamath Lake water levels and resulting flow in the Klamath River below the lake, as well as associated water temperatures and oxygen levels. The computer model will be used by BOR to maintain minimum lake levels and streamflows to enhance recovery efforts for

three endangered fish species. Additional work has been conducted to support instream-flow studies.

Klamath Wetlands, Shorebirds, and Waterfowl Studies

The USGS is researching the effects of decreased water supply to wetland areas in the National Wildlife Refuges and the resulting impacts on waterfowl, bald eagles, and shorebirds. Additionally, the USGS is participating in a cooperative pilot study in California that is evaluating wetland quality and the response to a wetland-cropland rotation cycle. The results will be used to develop computer models to evaluate management options for maintaining ecosystems that will support diverse and productive wetlands in coexistence with sustainable agriculture.

ESA-related Activities

Consultations

In February 2002, the BOR published a biological assessment of its proposed operation in the Klamath Project between June 1, 2002, through March 31, 2012. In May 2002, the FWS and NMFS each issued a biological opinion on the proposed operation. Both opinions concluded that the proposal would jeopardize the existence of endangered or threatened species, including the endangered coho salmon, endangered Lost River and shortnose suckers, and threatened bald eagle. Each opinion presented a Reasonable and Prudent Alternative (RPA) that the agencies believed would avoid jeopardy. Both RPAs proposed actions for USBR to take to improve water quality, water quantity, and aquatic habitat.

NOAA's RPA consisted of the following elements: (1) water management measures over the next 10 years; (2) a water bank program to provide flows to the Klamath River to improve coho salmon habitat; (3) an agreed upon long-term flow target to be achieved by 2012; (4) an inter-government task force to identify opportunities to supplement main-stem flows and implement actions to achieve the long-term RPA targets in the Klamath River basin (Conservation Implementation Program); and (5) an intergovernmental science panel to develop and implement a research program to identify and fill gaps in existing knowledge regarding coho salmon and their habitat requirements during various life history stages and water-year types.

The FWS, with BOR, developed an RPA alternative consisting of three elements: (1) reduce habitat loss and adverse water quality by using a 50% exceedence to forecast inflows into Upper Klamath Lake; (2) reduce entrainment of suckers at Link River Dam and associated hydropower diversions; and (3) study factors affecting water quality and access to water-quality refuge areas and implement actions to reduce the frequency of water-quality caused sucker die-offs and improve access to refuge areas.

NOAA Fisheries and FWS have each conducted over 250 consultations over the last five years with federal action agencies that fund or carry-out projects in the Klamath basin, such as BOR,

Army Corp of Engineers, Federal Highways Administration, the Forest Service, the BLM, and the BIA. These consultations evaluate impacts to threatened coho salmon, northern spotted owl, marbled murrelet, short-nosed sucker, Lost River sucker, bald eagle, tidewater gobi, western snowy plover, and several listed plants from a wide variety of federal projects including irrigation and water diversion, timber sales, watershed restoration, fish passage, gravel mining, and transportation projects.

Tribal 4(d) Rule: NOAA Fisheries issued a final rule under ESA section 4(d) modifying take prohibitions for threatened salmon and steelhead. The modifications create a section 4(d) limitation on take prohibitions for Tribal Resource Management Plans (TRMP) where the Secretary of Commerce has determined that implementing the TRMP will not appreciably reduce the likelihood of survival and recovery of the listed species. Over the past year, NOAA Fisheries has worked closely with the Yurok Tribe in its development of a request for Tribal 4(d) coverage of its TRMP for chinook and coho salmon.

Simpson Habitat Conservation Plan

NOAA Fisheries and the FWS have held technical and policy discussions with Simpson Resource Company regarding the development of a Habitat Conservation Plan under section 10(a) of the ESA for much of its industrial timber operations in northern California, including the Klamath River Basin, over the past three years. The Services published a Federal Notice announcing their receipt of Simpson's applications and provided for a 90-day public comment period starting in August 2002. The Services expect to issue permits by the summer 2003.

Green Sturgeon

In June 2001, NOAA Fisheries received a petition to list the North American green sturgeon as a threatened or endangered species under the ESA. The largest spawning population of green sturgeon is thought to occur in the Klamath River. Because of remaining uncertainties about their population structure and status, NOAA Fisheries added the green sturgeon to the agency's list of candidate species and will re-evaluate their status in five years provided sufficient new information becomes available.

Community Outreach

Environmental Education and Partnerships

Since 1998, BLM invested $8.5 million and their partners invested another $2.5 million in the upper Klamath basin to improve water quality and quantity. This funding was invested in job training programs, like "Jobs-in-the-Woods," creating local jobs and job training while improving the environment. These partnerships include watershed councils, the Klamath Provincial Advisory Council, Resource Advisory Councils, the Upper Basin Working Group, the Gerber/Willow Valley Coordinated Resource Management Planning Group, and others.

Trinity River Restoration Program

Federal agencies serve as members of the Trinity Management Council, which also includes tribes, the state of California, and Trinity County. The Council provides oversight and direction for activities to recover fish and wildlife populations in the Trinity River.

California Coho Recovery Planning

Recovery teams, comprised of state, tribal, federal and private entities, are working to develop voluntary conservation measures and identify by 2003 necessary state regulatory changes for a statewide coho recovery plan.

Five County Roads Program

NOAA Fisheries joined five northern California Counties (Siskiyou, Trinity, Del Norte, Homboldt, and Mendocino) to develop standard county road maintenance procedures. The effort, which includes funding and technical assistance, will help protect ESA listed species and their habitat.

Salmon River Learning and Understanding Group

The Salmon River is a significant tributary to the Klamath River in the lower basin. The Salmon River Learning and Understanding Group identifies watershed restoration and protection issues for a diverse group of stakeholders and receives technical assistance from NOAA Fisheries and others.

Outreach and Technical Assistance to Farmers

In implementing the 2002 Farm Bill, the U.S. Department of Agriculture's Natural Resources Conservation Service conducts a host of conservation and technical assistance programs with farmers throughout the Klamath Basin. These programs include basinwide planning efforts, resource conservation programs, soil surveys, cultural resource assessments, snow surveys and water supply forecasting.