



## **Accomplishments of the Alaska Region's Habitat Conservation Division in Fiscal Year 2005**

This report provides a summary of Habitat Conservation Division (HCD) activities in support of the sustainable management of living marine resources from October 1, 2004 through September 30, 2005.

HCD carries out NOAA Fisheries' statutory responsibilities for habitat conservation in Alaska under the Magnuson-Stevens Fishery Conservation and Management Act, Fish and Wildlife Coordination Act, National Environmental Policy Act, Federal Power Act, and other laws. HCD has two principal programs: identification and conservation of Essential Fish Habitat (EFH) through fishery management, and environmental review of non-fishing activities to minimize impacts to EFH or other habitats for living marine resources. HCD also supports habitat restoration projects in conjunction with the NOAA Restoration Center.

HCD has staff located in the Alaska Regional Office in Juneau and a field office in Anchorage. HCD coordinates extensively with other groups to facilitate habitat conservation. Within NOAA, such organizations include the Sustainable Fisheries Division and Protected Resources Division in the NOAA Fisheries Alaska Regional Office; the Alaska Fisheries Science Center; NOAA Fisheries Office of Habitat Conservation; NOAA General Counsel; and NOAA Ocean Service's Office of Response and Restoration. HCD also works in close partnership with other agencies and organizations, including the North Pacific Fishery Management Council; Army Corps of Engineers; Environmental Protection Agency; U.S. Fish and Wildlife Service; Minerals Management Service; U.S. Forest Service; Bureau of Land Management; Federal Energy Regulatory Commission; Alaska Department of Fish and Game; Alaska Department of Natural Resources; Alaska Department of Transportation and Public Facilities; and a variety of industry and conservation groups.

### **Essential Fish Habitat and Fishery Management**

#### EFH and Habitat Areas of Particular Concern (HAPCs)

HCD led a large team of analysts to complete the final *Environmental Impact Statement for Essential Fish Habitat Identification and Conservation in Alaska* (EIS) in advance of a court-ordered deadline. The EIS and a related analysis for HAPCs formed the basis for a momentous decision by the North Pacific Fishery Management Council to adopt extensive new measures to minimize the effects of fishing on EFH – including the largest marine protected area in the United States.

In response to an independent peer review and public comments on the draft EIS, HCD organized a workshop with Alaska Fisheries Science Center experts to develop new guidelines to evaluate the potential consequences of habitat disturbance for each stock of groundfish. The workshop resulted in a broader approach to assess whether stock status and trends indicate any potential influence of habitat disturbance due to fishing. The revised analysis considered

whether habitat impacts due to fishing may reduce the capacity of each stock to produce its maximum sustainable yield over the long term. The final analysis found no indication of any such effects, and concluded that fishing causes no more than minimal adverse effects on EFH in Alaska.

Staff from HCD and the Alaska Fisheries Science Center revised several other sections of the EIS in response to public comments on the draft, and produced a preliminary final EIS on schedule for the Council's final action in February. The team highlighted for the Council the uncertainties embedded in the analysis of the effects of fishing on EFH, and emphasized that additional precautionary measures may be warranted. The Council agreed, and endorsed a suite of new fishery closure areas totaling nearly 300,000 square nautical miles to protect relatively undisturbed habitats in the Aleutian Islands and Gulf of Alaska.

After the Council's vote, the team added a new alternative to the EIS analysis to reflect the environmental consequences of the Council's preferred measures; completed final edits to the entire EIS; published the final EIS; and developed the Record of Decision. HCD also assisted the Sustainable Fisheries Division with developing the Fishery Management Plan amendments and proposed regulations necessary to implement the preferred alternatives.

Overall, development of the EFH EIS emphasized the importance of integrating habitat considerations into fishery management. The Council committed to an ongoing process to evaluate additional habitat conservation measures, including the development of a separate analysis for the Bering Sea and a science-based process for identifying additional HAPCs.

#### Other Fishery Management Actions

HCD staff advised and assisted staff from the Sustainable Fisheries Division regarding a number of other fishery management actions during FY05. HCD contributed to the Environmental Assessment for the annual harvest specifications for the groundfish fisheries to evaluate potential effects on habitat, and completed an EFH consultation. HCD staff also reviewed analyses and draft decision memoranda for a variety of regulatory amendments, and recommended modifications in some cases to ensure the analyses clearly reflected consideration of effects on EFH.

#### **Environmental Review to Minimize Habitat Losses**

HCD personnel conducted a wide variety of environmental review activities during FY05. HCD provided consultative services and technical assistance to regulatory agencies, industries, land owners, and others. Staff reviewed approximately 600 actions proposed by federal or state agencies and evaluated potential adverse effects to living marine resources and their habitats, including EFH. For about 160 of those actions, HCD prepared written conservation recommendations that NOAA Fisheries submitted to the agencies responsible for authorizing, funding, or undertaking the proposed actions. The remainder of this section provides examples of successful environmental reviews conducted by HCD staff.

#### National Science Foundation Research Dredging

HCD staff reviewed a proposal for geological research in the Aleutian Islands that would include rock dredging in areas with cold water corals. The study proposed for funding by the National Science Foundation (NSF) would locate sites of recent seafloor volcanism using

multibeam bathymetric and single channel seismic surveys, and collect rock samples for geochemical studies. NOAA Fisheries was particularly concerned about dredging proposed southeast of Semisopchnoi Island. This site is one of six Aleutian Islands Coral Habitat Protection Areas, and contains “coral garden” habitat characterized by an unusually dense and diverse assemblage of cold water corals. These coral garden habitats were discovered by NOAA Fisheries scientists in 2002 and have been observed nowhere else. In light of the potential impacts of the research dredging, and the extensive public process that led to agreement to protect the coral gardens from all bottom contact fishing gear, NOAA Fisheries urged NSF to restrict the project so as to avoid the coral gardens. In response, NSF agreed to add a day to the cruise to try to identify suitable alternative sites for rock sampling, and to attempt to avoid the shallow summits of volcanic structures where coral densities may be the highest.

#### Streamlining the Environmental Review of Transportation Projects

HCD staff together with staff from the Federal Highway Administration (FHWA), Alaska Department of Transportation and Public Facilities (ADOT), and other federal and state agencies, finalized an agreement to ensure early and effective consultation and coordination for highway construction projects. The intent is to allow signatory agencies to focus staff resources on major projects while ensuring the adverse effects of minor projects are identified and addressed. ADOT and FHWA will strive to incorporate design elements to conserve natural resources and result in long-term socio-economic benefits. The parties will eventually develop several sub-agreements to address other aspects of environmental planning for transportation projects. HCD will ensure that living marine resource issues are addressed in the sub-agreements, which will cover issue resolution procedures, mitigation guidance, minor project processing procedures, and the overall coordination/review process, including scoping.

#### Alaska Water Quality Standards

The State of Alaska proposed changes to its water quality standards that could affect habitat conditions for marine and anadromous fish. Traditionally the state has banned the use of mixing zones (areas where water quality standards for individual pollutants may be exceeded) for discharges from mines, seafood plants, sewage treatment plants, and other facilities into waters that support spawning and rearing fish. The proposed regulatory change would allow certain discharges in such areas, and could affect many projects and waterbodies. HCD provided input to the Environmental Protection Agency and Department of Environmental Conservation on the potential degradation of habitat for fish and benthic communities that would result from the revised water quality standards, and continues to work with the state on the proposed regulations.

#### Haines Highway Project

HCD staff continued to work with ADOT on the monitoring of the Haines Highway project mitigation. The mile 36 stream that was created as mitigation for this project supports salmonid spawning and rearing and has stable stream morphology. A portion of the road revetment that isolates this stream from the Klehini River failed. HCD persuaded ADOT to incorporate bioengineering features into the emergency repair work to provide better habitat characteristics for outmigrating salmonids from the mile 36 stream.

### Wrangell Airport Expansion

HCD's involvement led to substantial changes in the proposed Wrangell airport expansion project. ADOT accepted NOAA Fisheries' recommendations not to use wood waste as fill; to reduce the runway safety area to minimize loss of intertidal and subtidal habitats; and to provide compensatory mitigation.

### Cooper Lake Hydropower Project Relicensing

HCD played a major role in negotiating a settlement agreement for relicensing of the Cooper Lake Hydropower Project. The project was constructed in the early 1960s and reduced stream flows and water temperatures in Cooper Creek, a tributary of the Kenai River. The temperature declines resulted in greatly diminished use of the stream by salmonids. HCD initially assisted with study development and data analysis, and then participated in settlement negotiations between interested parties and Chugach Electric Association. The final agreement calls for Chugach Electric to spend \$10 million on project modifications to improve year-round stream flows and increase water temperatures. These modifications should result in increased salmonid use of Cooper Creek.

### Major New Developments in Upper Cook Inlet

HCD played a key role in development and permitting for two large projects in upper Cook Inlet. Environmental and design analyses continued for the proposed Port of Anchorage expansion and Knik Arm bridge projects. Fisheries studies requested by HCD have shown extensive use of the Knik Arm area by over 20 species of fish including all five species of salmon. HCD continues to work with other federal and state agencies and project proponents to reduce potential impacts to living marine resources and develop suitable compensatory mitigation for unavoidable impacts.

### Galore Creek Mine

HCD's participation in the review of the proposed Galore Creek copper/gold/silver mine in British Columbia led to additional monitoring sites on the Stikine River in Alaska, baseline monitoring of petroleum hydrocarbons, and creation and selection of an alternative access route. The mine site is east of the Stikine River between the Porcupine and the Scud Rivers. Two access routes were under consideration. The southern route followed the Iskut, Stikine, and Porcupine Rivers before entering the Galore basin through an access tunnel, and had potentially large impacts to anadromous fish and wetlands. The northern route followed the Moore Creek drainage, entered the Galore basin through a long tunnel, and had less negative impacts to anadromous fish, but higher construction costs and risks. Based on concerns expressed by NOAA Fisheries and other agencies, the applicant proposed a modified northern route as the preferred option, avoiding most of the problems with the other alternatives.

### Kensington Gold Mine

HCD provided conservation recommendations to the Corps of Engineers for a controversial proposed mine development located north of Juneau. HCD also assisted Protected Resources Division staff with the development of an Endangered Species Act Biological Opinion to assess the effects of the project on whales and sea lions. HCD's recommendations focused on ways to reduce the impacts of a docking facility on habitat that supports spawning and rearing forage fish that are relied upon by managed fish species and marine mammals. The Corps is reviewing its

final permit decision for the mine based on a legal challenge (unrelated to NOAA Fisheries' recommendations) by an environmental group.

#### Berners Bay Monitoring Money and MOU

HCD helped to secure funds to monitor water quality and fish habitat in Berners Bay as part of a comprehensive evaluation of current habitat conditions and potential changes following the development of the Kensington Mine. The funds were provided by the mining company, Coeur Alaska, through The Nature Conservancy. HCD is working with Coeur and other groups to facilitate funding for additional monitoring work.

#### Mitigation for Log Transfer Facility Impacts

HCD persuaded the developer of a new log transfer facility near Ketchikan to support transplanting eelgrass from the development site to a nearby cove to compensate for impacts to bottom habitats. HCD staff then led an effort to evaluate two techniques for transplanting eelgrass. Development in nearshore areas of southeast Alaska threatens eelgrass beds, which provide important habitat for juvenile fish and invertebrates and help stabilize shorelines, yet little mitigation or restoration research has been done in Alaska. HCD and Auke Bay Laboratory staff will monitor the transplants quarterly and evaluate the results of the study to determine whether eelgrass transplanting is viable in southeast Alaska.

#### Shotgun Cove Habitat Assessments

HCD staff completed the second year of a cooperative study with the U.S. Fish and Wildlife Service to collect bimonthly baseline information for fish and habitat in Shotgun Cove, near Whittier in Prince William Sound. The cove is a likely site for substantial future harbor development. The team led by HCD is documenting the presence and relative abundance of juvenile and adult salmon, herring, forage fish, and other organisms as well as delineating eelgrass beds and shoreline habitats. The resulting site-specific information will assist local, state, and federal agencies in planning development activities to account for impacts to fishery resources. HCD added additional studies this year to examine the genetic structure of the eelgrass beds, assess the health and stability of the beds by determining the changes in carbon isotope ratios, and measure the rate at which plants are lengthening their rhizomes. These additional studies were a cooperative effort with a University of Alaska graduate student.

#### Oil Spill Response Planning

HCD coordinated NOAA Fisheries' input to the revisions to the Southeast Alaska Subarea Contingency Plan for oil spills. HCD, the Protected Resources Division, and the Auke Bay Laboratory provided detailed comments on draft revisions to the plan. NOAA Fisheries staff are included in the plan as emergency contacts in the event of an oil spill.

#### Alaska Coastal Management Plan

HCD assisted NOAA's Office of Ocean and Coastal Resource Management by providing information for an EIS for Alaska's proposed amendments to its coastal management program. The proposed amendments would make substantial changes to the program, with potentially significant adverse effects to living marine resources and their habitats.

## **Habitat Restoration**

### Anchorage Salmon Restoration Task Force

HCD has been involved in the formation of a Salmon Restoration Task Force to aid the Municipality of Anchorage with salmon restoration plans for three watersheds. Anchorage received \$5 million from the Pacific Coastal Salmon Recovery Fund to restore salmon habitat. HCD sits on the task force and will help prioritize projects to maximize improvements to salmon habitat in urban and industrial areas of the city.

### Ship Creek Habitat Restoration

HCD personnel represented NOAA at the unveiling of a new bridge over Ship Creek. Anchorage Mayor Mark Begich attended and welcomed the bridge as a step in the right direction for restoring Ship Creek salmon habitat. The project involved federal, state, and municipal agencies and non-profit organizations in the removal of three corroded culverts, replacing them with a two-lane bridge over one of the city's most popular fishing creeks. Over \$3 million in NOAA restoration funding supported the project. The creek supports runs of coho, chum, Chinook, and pink salmon, rainbow trout, and Dolly Varden. Ship Creek salmon also provide important seasonal prey for harbor seals and the depleted Cook Inlet stock of beluga whales.

### Moose Creek Fish Passage

HCD staff provided technical advice to the Chickaloon Tribal Council for a large scale habitat restoration project that returned Moose Creek to its historical meander after fish passage had been blocked for decades following channel rerouting by the expansion of the Alaska Railroad. HCD staff also participated in willow planting at the site to stabilize riparian habitat.

### Award for Silver Salmon Creek Restoration

A habitat restoration project that involved HCD and NOAA Restoration Center staff received a 2005 Coastal America Partnership Award. The project in the Kenai River watershed involved the replacement of an undersized culvert and restoration of a stream channel to reopen eight miles of stream for unimpeded use by Chinook and coho salmon and other species. The project was completed in 2004.

### Intra-agency Collaboration on Habitat Restoration

HCD staff supported the NOAA Restoration Center by providing technical information on local projects, alerting Restoration Center staff to habitat restoration opportunities in the region, reviewing habitat restoration proposals, and helping to rank priorities for NOAA funding. Assistance from HCD allows the Restoration Center to operate in Alaska with minimal staff.

## **Other Noteworthy Activities**

### Artificial Reef Demonstration Project

HCD designed and funded the procurement of an artificial reef for a demonstration project to be conducted in 2006 in Whittier. Additional funds from the NOAA Restoration Center will defer the costs of deploying the reef. The project will investigate the efficacy of using artificial reefs for habitat enhancement or restoration in sub-arctic waters. (Similar reefs have been used

in the lower 48 states and British Columbia, but never this far north.) Coastal development projects in Alaska often involve a net loss of intertidal or subtidal habitat, but few options are available to offset these losses. Artificial reefs may offer a means to provide complex and productive habitat features that could be used as compensatory mitigation for unavoidable impacts to fish habitat. The demonstration reef will be compared with a nearby experimental reef that is being deployed (based on HCD's recommendations) as mitigation for habitat loss from the expansion of a shipping facility. Both reefs will be monitored for colonization by macrophytic algae, sessile invertebrates, motile invertebrates, and fish.

#### Forest Service Fish Passage Working Group

HCD staff continue to participate in a Tongass National Forest Fish Passage Working Group to develop, test, and recommend a process to set priorities for repair and replacement of culverts that do not meet state fish passage requirements. In addition, the working group will recommend a mitigation toolbox for culverts where passage will not be improved.

#### State of Alaska Small Hydropower Licensing Work Group

HCD served on a work group to assist in the development of new state licensing regulations for small hydropower projects. The group developed draft regulations which were then presented to the Regulatory Commission of Alaska for possible adoption.

#### Shore Zone Mapping

HCD provided funding for a second year of the shore zone mapping in southeast Alaska, in coordination with the Auke Bay Laboratory and other agencies and non-governmental groups. The project inventories coastal habitats using aerial surveys with video, still photos, and classification of habitat features. This year's survey covered additional portions of northern southeast Alaska. HCD also assisted Analytical Team staff and a contractor who developed an interactive website to make all of the imagery and mapping accessible to the public. Other federal and state agencies are becoming more involved in the project, contributing funds, and leveraging data uses. The 2006 survey will be in southern southeast Alaska.

#### Diving Operations

HCD scuba divers conducted dive operations to assess habitats at risk from proposed development activities in southeast and south central Alaska, and also conducted regular proficiency dives. Examples of HCD dive operations include the following:

- Supporting the Shotgun Cove habitat assessment by surveying benthic and fish species at beach seining sites, measuring eelgrass growth at beach seining sites, and collecting eelgrass samples for genetic studies;
- Supporting the artificial reef demonstration project by assessing benthic growth on existing underwater structures and identifying the best depth for locating the proposed artificial reef structures;
- Assisting Auke Bay Laboratory staff by retrieving submerged data logging instruments from a location off Douglas Island and deploying new instruments at these sites; and
- Using required proficiency dives as an opportunity to support research and education, such as collecting specimens for local aquaria and for University of Alaska invertebrate biology courses and research

### Vessel Safety and Operation

HCD had a complete safety and condition inspection conducted by a private marine surveyor for the four small boats managed and operated by Anchorage staff. All four boats were found to be in “very good condition with good maintenance schedules followed by the managing and operating personnel.”

The Anchorage small boats were operated a total of 25 days this fiscal year. The projects consisted of 11 days for the National Marine Mammal Laboratory beluga tagging program, 10 days for habitat assessment work in Shotgun Cove, two days for dive operations for a site assessment for potential artificial reef deployment, one training day for Protected Resources Division staff, and one day for recovery of a stranded beluga whale.

### Rotational Assignments/Details

HCD hosted NOAA Fisheries staff from other regions for two rotational assignments this year. Bren Haase from the Southeast Region worked on the development of standard recommendations for the protection of fish and marine mammals from projects that involve pile driving and blasting. HCD is working with the Protected Resources Division to finalize the recommendations, which have already been used in NOAA Fisheries’ comments on two projects in the Sitka area. These guidelines may be proposed to the Corps of Engineers for use in a General Permit for pile driving and blasting operations. Meanwhile Dennis Carlson from the Northwest Region assisted HCD in a variety of field work. He helped assess marine resources in Shotgun Cove by gathering baseline information on nearshore fish populations and their habitats, conducted a site assessment of a road expansion project in McCarthy that would entail several anadromous stream crossings, and evaluated the proposed expansion of the harbor at Port Valdez. Dennis also participated in the Interagency Environmental Streamlining group to address the concept of a programmatic permit to reduce processing time for transportation projects. He provided insight on lessons learned in Washington and Oregon and some very comprehensive comments that will be useful in our future coordination work.

Jeanne Hanson of the Anchorage Field Office completed a six week detail as acting Chief of the Habitat Protection Division at NOAA Fisheries headquarters in Silver Spring, Maryland, where she assisted with a number of initiatives in support of the national Habitat Program.

### **Training and Development**

HCD staff participated in a wide variety of training and developmental opportunities during FY05. National workshops and conferences attended by HCD staff included the Alaska Forum on the Environment (Anchorage), NMFS national hydropower workshop (Charleston), Mitigation Calculator workshop (Seattle), American Fisheries Society annual meeting (Anchorage), Performance Measures Working Group meeting (Silver Spring), Conference on Improving Fishery Management: Melding Science and Government (Seattle), National Environmental Policy Act Tiering Workshop (Juneau), Managing Our Nation’s Fisheries conference (Washington), GeoTools conference (Charleston), and an EFH Coordinators meeting (Boulder). HCD staff also participated in many training opportunities, including media training, First Aid and CPR certification, automated records management training, consultation tracking system training, and training in technical writing. An HCD staffer also successfully completed the USDA Graduate School’s 2005 Executive Leadership Program.