



Environmental Contaminants Program

Alaska Region

Responding to Emergencies

Spills severely impact natural resources managed by the U.S. Fish and Wildlife Service in Alaska, as evidenced by the *Exxon Valdez* oil spill, and more recently by the M/V *Selendang Ayu* grounding in the Aleutian Islands.

The Environmental Contaminants (EC) Program coordinates Service spill response efforts, and represents the Service within the Unified Command. We also coordinate with State and Federal agencies, private industry, and response organizations between spills. This collaboration results in response plans that help minimize injury to fish, wildlife, and their habitats.

Selendang Ayu - The EC Program led the Service response to the December, 2004 grounding of the freighter M/V *Selendang Ayu*, which spilled more than 354,000 gallons of intermediate fuel oil and marine diesel in the waters off Unalaska Island. This was the largest spill in Alaska since the *Exxon Valdez* oil spill in 1989, affecting refuge lands, marine mammals and migratory birds.



The *Selendang Ayu* broken in two and leaking oil off the coast of Unalaska, AK.

Over 1,700 oiled bird carcasses and 6 sea otter carcasses were collected during the response, representing just a fraction of total wildlife losses from this incident.



Oiled and scavenged bird carcasses collected during the *Selendang* spill.

EC staff served within the Unified Command in Dutch Harbor, AK, providing oversight of wildlife response activities (carcass collection, capture and rehabilitation), evaluating wildlife implications of various response strategies, and evaluating the success of shoreline cleanup.

Restoring Injured Resources

The Fish and Wildlife Service, along with other state and federal agencies, serves as a trustee for natural resources injured during spills. Trust resources managed by the Service include refuge lands, migratory birds, endangered species, and some marine mammals and fisheries. The EC Program coordinates Service efforts to assess injury to these resources following significant spills, and to implement restoration projects that benefit injured species or habitats.

Selendang Ayu - Service EC staff, working closely with other trustees, secured an unprecedented \$4.6 million authorization from the National Pollution Fund Center for Natural Resource Damage Assessment and Restoration initiation during this incident. These funds, along with funding from the Responsible Party, were used to collect time-critical data during the first year following the spill.

The Service, representing the Department of the Interior (DOI), is the lead trustee for the six agency *Selendang Ayu* trustee group. The trustees are currently working cooperatively with the Responsible Party to assess resource damages and explore potential restoration options.



Service and other agency personnel evaluate oiled shoreline and cleanup efforts on the *Selendang* spill, Unalaska, AK.

Kuroshima - The seafood freighter M/V *Kuroshima* grounded on Unalaska Island in 1997, spilling 39,000 gallons of heavy fuel oil. Following the spill, more than 150 bird carcasses were collected, and trustees estimated that at least 2,000 birds were killed. The EC Program staff represents DOI on the trustee council charged with implementing restoration.

As part of the case settlement, the Service has conducted a bird restoration project in cooperation with the local Qawalangin Tribe; eradicating introduced arctic foxes which prey on breeding birds. A 2005 survey confirmed that the fox removal was successful. The Service revisited Avatanak Island in 2007 verifying recovery of bird populations following predator removal.

Thriving Fish and Wildlife Populations

Contaminants that affect fish and wildlife and their habitats in Alaska come from atmospherically deposited pollution and local sources, especially landfills and former military sites. Of most concern are persistent and toxic chemicals such as pesticides, industrial chemicals, and heavy metals. The EC Program investigates contaminant threats to Service trust resources, focusing on the following areas:



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Contaminants studies were conducted in salmon, an important subsistence resource.

Subsistence Species - Environmental contaminants may affect the population health and viability of subsistence species, impacting the continued availability of these resources. The Service evaluates contaminants in fish, such as salmon and pike, and wildlife used for subsistence, especially those on National Wildlife Refuges.

We provide that information to public health partners, including the State of Alaska and tribal health agencies, and with them conduct outreach and education in rural villages about the benefits and any possible risks from eating subsistence foods. We also provide technical assistance to other resource

agencies and the military on sampling contaminants in fish and wildlife that are used for subsistence.

Declining and Threatened Species - Contaminants may hamper the recovery of listed species. We have studied exposure to lead shot, and impacts of chronic oiling, on threatened Steller's eiders.

We also proactively investigate factors contributing to species declines, as this information may help stem further population reductions. We have studied a rapidly declining species, the red-throated loon, and have started to investigate contaminants in rare yellow-billed loons.

Abnormalities - High abnormality rates have been observed in wood frogs on the Kenai National Wildlife Refuge and in black-capped chickadees from Southcentral Alaska. The EC Program has studied these abnormalities in cooperation with several partners.



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The EC program is investigating the high rate of abnormal wood frogs, like this one with a deformed hind leg, found on Alaska Refuges.

Clean Refuges

Alaska's National Wildlife Refuges are often envisioned as pristine, but even the most remote areas of the state often have a legacy of contamination. Activities that have introduced contaminants to



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Abandoned drums on Tanaga Island, part of the Alaska Maritime NWR.

Alaska's refuges include oil exploration and production, mining, military activities, and even nuclear weapons testing on Amchitka Island. After use, these sites were abandoned, often with little or no cleanup. The largest contaminated sites on refuges are associated with former military installations, including sites on Adak, Amchitka, Kiska, and Attu islands. The Environmental Contaminants Program helps address refuge contamination issues by:

- Designing scientifically sound contaminant studies of refuge resources;
- Helping direct cleanup efforts conducted on refuge lands;
- Coordinating Service pesticide use via an integrated pest management program, and;
- Evaluating land transfers to ensure the Service does not acquire contaminated property.

Summary

The EC Program plays a vital role in responding to spills, and restoring habitats injured by these incidents. We help cleanup a legacy of contamination on National Wildlife Refuges, and provide scientifically sound information regarding contaminant impacts to Service trust resources, benefiting resource managers, health professionals, and the public.