

OREGON DEPARTMENT OF FISH AND WILDLIFE

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Removing California sea lions on the lower Columbia River

KEY POINTS – April 2013

Protecting vulnerable salmon and steelhead

- Wildlife managers from Oregon and Washington have resumed efforts to remove California sea lions that have been observed preying on federally protected salmon and steelhead immediately below Bonneville Dam.
- This action was authorized by NOAA's Fisheries Service under provisions of the federal Marine Mammal Protection Act, which recognizes the toll marine mammals can take on threatened and endangered fish stocks.
- Migrating fish are especially vulnerable in the waters just below Bonneville Dam, where returning salmon and steelhead congregate as they prepare to move up the dam's fish ladders to spawn upstream.
- NOAA authorized the states to remove 93 California sea lions that meet specific criteria per year.
- Since 2008, the states have removed more than 54 California sea lions under a similar authorization. Of those, 11 were placed in zoos and aquaria.
- The California sea lion population has grown from about 10,000 animals to nearly 300,000 today. State wildlife managers have a responsibility to protect salmon and steelhead stocks at risk of extinction.

Predation levels growing

- From late March through May, individual California sea lions consume an average of 7 fish a day below Bonneville Dam.
- In 2002, observers with spotting scopes watched 30 California sea lions consume 1,010 salmon and steelhead from the dam to one-quarter mile downstream. By 2010, a total of 89 sea lions were observed consuming 6,081 fish.
- The numbers only account for the sea lions observed immediately below Bonneville Dam. An estimated 1,000 animals forage each year between the mouth of the Columbia River and Bonneville Dam, 145 miles upriver. Some estimates of the total predation rate suggest it could be as high as 16-20 percent of the total run.

- Approximately 15-23 percent of the fish consumed at Bonneville Dam are wild spring chinook salmon and steelhead listed for protection under the federal Endangered Species Act (based on “mark rates” for hatchery fish those years).
- Only marked hatchery spring chinook and steelhead may be kept in sport and commercial fisheries on the lower Columbia River. Wild fish must be released.

Criteria and options to lethal removal

- Individual California sea lions can be removed (euthanized or transferred to zoo or aquarium) only if they can be individually identified by brands, tags or natural markings. They also must meet three criteria to be eligible for removal: 1) Been observed eating salmonids at Bonneville Dam, 2) Been observed at the dam a total of any five days, and 3) Have been previously exposed to non-lethal hazing.
- For six years, state biologists tried to scare sea lions away from the fish below Bonneville Dam using “hazing” techniques such as cracker shells and seal bombs before seeking federal approval to use lethal methods.
- Hazing temporarily interrupts feeding, but the sea lions resume eating shortly after hazing stops.
- Efforts to relocate California sea lions have been similarly unsuccessful. Even those transported as far as southern California.
- Since 2008, 11 California sea lions have been relocated to zoos or aquaria.
- In 1994, before lethal removal was an option, California sea lions decimated the winter steelhead run at the Ballard Locks in Seattle. That run is now classified as functionally extinct.

Other actions to protect at-risk stocks

All sources of risk to wild fish on the Columbia River have been reduced by federal, state, tribal, and local governments. Sea lions are the last major risk to be addressed.

- Hundreds of millions of dollars has been spent restoring spawning habitat upstream.
- Millions more has been spent to make hydroelectric dams more “fish friendly.”
- Fisheries have been reduced substantially, in particular when runs are small, and have been largely restructured to prohibit the retention of wild fish.
- Hatchery programs have been modified to reduce the impact of hatchery fish on wild populations.
- A bounty program for northern pikeminnow has reduced predation on young salmon; as has the relocation of Caspian tern colonies (which also feed on salmon smolts).