



IDAHO
DEPARTMENT OF
ENVIRONMENTAL
QUALITY

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Best Management Practices for Mercury Collection from Suction Dredge Mining Activities

This fact sheet provides information to suction dredgers for properly collecting, transporting, storing, and disposing of elemental mercury necessary to protect human health and the environment.

Background

In addition to being mined, mercury can also be found in Idaho's environment from historic gold mining practices. In the past, hundreds of pounds of liquid mercury were added to riffles and troughs in a typical sluice to enhance gold recovery from hydraulic mining. The high density of mercury allowed gold and gold-mercury amalgam to sink while sand and gravel passed over the mercury and through the sluice. However, large volumes of turbulent water would flow through the sluice causing many of the finer gold and mercury particles to wash through and out of the sluice. Much of this mercury is still present in Idaho waterways today, and suction dredge miners frequently encounter and collect mercury.

Mercury is highly toxic, accumulates in the food chain, and can cause severe health issues ranging from tremors and emotional changes to kidney and respiratory failure. For this reason, the US Environmental Protection Agency (EPA) has spent over \$1 million in Idaho between 2005 and 2009 cleaning up elemental mercury spills. EPA continues to collaborate with Idaho agencies to prevent future spills.

Collection

During suction dredging activities, mercury can collect in sluice boxes or other equipment. If this occurs, transfer the mercury into a vapor-proof, sturdy, unbreakable container to be safely stored, disposed of, or recycled. Use rubber, nitrile, or latex gloves when handling mercury to prevent adverse health impacts from mercury exposure to the skin. Use a mercury respirator to minimize inhalation of mercury vapors.

Depending on the amount of mercury collected, pour the mercury directly into the container or use an eye dropper to transfer the residual mercury beads to the container. To prevent mercury from spilling on the ground and impacting the environment, use further containment, such as a second, larger unbreakable container when transferring mercury from dredging equipment to the container. Allow plenty of time to safely transfer the mercury to prevent spills and avoid contaminating shoes or clothing. If clothing or other items come into contact with mercury, consider them contaminated and dispose of them properly. Contaminated clothes and shoes brought into the home may release mercury vapors.

Transportation

Always use secondary containment when transporting mercury from the field or mining collection site to the disposal site or temporary storage site. Place the secondary container of mercury in a secure location in the vehicle so it doesn't tip over, shift, or slide during sudden stops or turns. Transport containers in the back of a pick-up truck or in a car trunk.

Storage

Place mercury and mercury wastes (items contaminated by mercury) in a vapor-proof, unbreakable container and store in secondary containment, such as a second, larger unbreakable container out of reach of children and pets. Label the container: "DANGER Toxic Mercury – DO NOT OPEN." Consider anything that touched the liquid mercury contaminated and dispose of it properly.

Mercury Waste Management/Recycling

Some communities have household hazardous waste disposal programs that will accept mercury free to citizens and at a low cost to small businesses or very small quantity generators (previously called conditionally exempt small quantity generators). To find out if your community has a program, contact your county solid waste department, landfill, or city public works department. If your county does not have a program, but a nearby county does, that county might be willing to accept out-of-county waste at a lower cost than alternative disposal options. You could also generate support for a county-sponsored event or, if you belong to a mining association, an association-sponsored event. Contact your local Idaho Department of Environmental Quality office for questions on hazardous waste regulations.

Boise (208) 373-0550 toll-free: (888) 800-3480	Idaho Falls (208) 528-2650 toll-free: (800) 232-4635	Pocatello (208) 236-6160 toll-free: (888) 655-6160
Coeur d'Alene (208) 769-1422 toll-free: (877) 370-0017	Lewiston (208) 799-4370 toll-free: (877) 541-3304	Twin Falls (208) 736-2190 toll-free: (800) 270-1663

Below is a list of hazardous waste disposal services; other options may also be available. The Idaho Department of Environmental Quality does not endorse specific recyclers or disposal services.

Company	Phone Number
Able Clean-up Technologies	(866) 466-5255
H2O Environmental Services	(208) 343-7867
Safety-Kleen	(208) 342-8882
Specialty Environmental Services	(208) 327-9977