



## Best Management Practices for Mercury Collection from Suction Dredging Activities

*This fact sheet provides information to suction dredgers regarding the proper collection, storage, and disposal methods for 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. To enhance gold recovery from hydraulic mining, hundreds of pounds of liquid mercury were added to riffles and troughs in a typical sluice. 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 U.S. Environmental Protection Agency (EPA) has spent over \$1 million in Idaho between 2005 and 2009 cleaning up elemental mercury spills and 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, the mercury should be transferred into a vapor-proof, sturdy, unbreakable container to be safely stored and disposed of or recycled. Rubber, nitrile or latex gloves should be used when handling mercury to prevent adverse health impacts from mercury exposure to the skin. Consideration should also be given to using a mercury respirator to minimize inhalation of mercury vapors.

Depending on the amount of mercury collected, the mercury can either be poured directly into the container or an eye dropper can be used to transfer the residual mercury beads to the container. Secondary containment, such as a second, larger unbreakable container, should be used when transferring mercury from dredging equipment to the container to prevent mercury from spilling on the ground and impacting the environment. Plenty of time should be allowed to safely transfer the mercury and prevent spills and the contamination of shoes or clothing. If clothing or other items come into contact with mercury, they should be considered contaminated. Contaminated clothes and shoes brought into the home may release mercury vapors into the home. The recommended practice is to properly dispose of contaminated clothing and shoes.

### **Transportation**

Transporting the secondary container of mercury from the field or mining collection site to the disposal site or temporary storage site should be done in a manner that does not compromise the containers. It is suggested that the secondary container of mercury be placed in a secure location in the vehicle so it doesn't tip over. This will minimize shifting or sliding during sudden stops or turns. Transport containers in the back of a pick-up truck or in a car trunk.

## Storage

Mercury and mercury wastes (items contaminated by mercury) should be put in a vapor-proof, sturdy, unbreakable container and stored in secondary containment, such as a second, larger unbreakable container, out of reach of children and pets. Anything that touched the liquid mercury should be considered contaminated. Contaminated clothes and shoes brought into the home may release mercury vapors into the home. The recommended practice is to properly dispose of contaminated clothing and shoes. Label the container: "DANGER Toxic Mercury – DO NOT OPEN."

## Mercury Waste Management/Recycling

Some communities have household hazardous waste disposal programs available for free to citizens and/or at a low cost to small businesses or conditionally exempt small quantity generators. To find out if your community has a program contact your county solid waste department or landfill or city public works department. If your county does not have a program, but a nearby county does, it may 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 DEQ office for questions on hazardous waste regulations.

### Boise

ph: (208) 373-0550  
toll-free: (888) 800-3480

### Idaho Falls

ph: (208) 528-2650  
toll-free: (800) 232-4635

### Pocatello

ph: (208) 236-6160  
toll-free: (888) 655-6160

### Coeur d'Alene

ph: (208) 769-1422  
toll-free: (877) 370-0017

### Lewiston

ph: (208) 799-4370  
toll-free: (877) 541-3304

### Twin Falls

ph: (208) 736-2190  
toll-free: (800) 270-1663

Below is a list of hazardous waste disposal services; other options may also be available. DEQ does not endorse specific recyclers or disposal services. Before choosing a service, verify the handling, treatment, and disposal or recycling practices and the practices of the destination facility used.

<b>Company</b>	<b>Phone Number</b>
Able Clean-up Technologies	(509) 466-5255
Clean Harbors	(435) 843-4856
Environmental Management Solutions	(208) 895-0326
H2O Environmental Services	(208) 343-7867
PSC	(888) 773-9589
Safety Kleen	(208) 234-4002
Specialty Environmental Services	(208) 327-9977
Veolia Environmental Services	(801) 294-7111