



Dredge Sediment Upland Disposal

Dredging or excavation of sediment and debris from waterways is often necessary to increase depth or improve channel hydraulics. Dredging or excavation may occur below the water or along dry embankments below the normal high water mark. Upland disposal refers to permanent disposal of dredge or excavated sediments on land and away from the water body and nearshore area. This fact sheet provides information for characterizing sediments and disposal options. Since site-specific conditions must be considered, the Department of Environmental Quality (DEQ) is providing general information on processes related to dredge sediment upland disposal.

Dredge sediments may be contaminated with pollutants from local and upstream sources (e.g., municipal and industrial discharges, mining activities, septic effluent, accidental releases). Suspected contaminants may include metals, petroleum constituents, pesticides, polychlorinated biphenyls and dioxins, among others. Disposal of sediments on upland sites may spread the contamination and impact other areas. Proper planning, permitting, handling, and disposing of sediments can prevent adverse effects to human health and the environment.

Dredging and Excavation Activities

Dredging and excavation activities may require permits. DEQ and other agencies may require notification that applicable permits have been obtained. Examples of local, state, and federal authorities to contact before starting any removal activities may include:

- US Army Corps of Engineers (USACE, 404 Permit)
- US Environmental Protection Agency (EPA, Clean Water Act implications)
- Idaho Department of Water Resources (Stream Channel Alteration Permit)
- Idaho Department of Lands
- Local Counties or Cities

A number of techniques may be employed to dredge sediments. Information is available from the [USACE Dredged Material Management Office: *www.nws.usace.army.mil/Missions/Civil-Works/Dredging*](http://www.nws.usace.army.mil/Missions/Civil-Works/Dredging)

Dredge sediments are often removed and transported to a staging area onshore where they are dewatered (if necessary) and properly characterized for known or suspected contaminants. The sediments may also be sampled in place before dredging to evaluate if special handling and/or containment are necessary. A hazardous waste exemption may be applicable for sediments disposed in aquatic environments.

Environmental Characterization of Dredge Sediments

Temporary staging allows the sediments to dewater and the resulting effluent to be temporarily contained and treated before discharging back into the originating surface water body. Before final disposal, the dewatered sediments must be characterized to determine the presence and concentrations of any potential contaminants. Depending on the analytical results, the sediments may be transported to the appropriate facility or location for final disposal.

Data collected during characterization sampling must be of adequate quality for DEQ and other appropriate regulatory agencies to make decisions. Samples must be collected following approved

methods and analytical techniques defined in a DEQ-approved [quality assurance project plan](#) (QAPP): <http://www.deq.idaho.gov/assistance-resources/quality-management/>

The number and type of waste characterization samples needed are site specific and depend on the amount of dredge sediments, the type of potential or expected contaminants, and the available upland disposal options. In general:

- An appropriate number of samples and approved analytical methods should be used to characterize the stockpiled sediment.
- The number of samples and sampling methodology selected should provide statistically-defensible results.
- Landfills may require specific analyses or testing before accepting the waste. This should be considered when selecting the appropriate analyses and number of samples.

Disposal

Dredge sediments may be classified as hazardous waste, contaminated waste, or non-contaminated waste. This determination depends on the contaminant type, concentrations, and waste characteristics. To make this determination, the analytical results from the sediment characterization sampling are compared to the appropriate regulatory determination criteria including:

- Hazardous waste determination for listed or characteristic waste (40 CFR, Part 261, Subpart C and 40 CFR Part 261, Subpart D)
- EPA Regional Screening Levels for Residential Soil (metals and non-petroleum compounds) <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>
- DEQ Residential Use Screening Levels (petroleum compounds) <http://www.deq.idaho.gov/waste-mgmt-remediation/remediation-activities/risk-evaluation-manual/>
- US Geological Survey or site specific background concentrations (metals) <https://mrdata.usgs.gov/geochem/doc/home.htm>

Analytical Result	Classification	Disposal Restrictions
Less than criteria	Non-contaminated	No environmental restrictions
Greater than criteria but not classified as a hazardous waste	Contaminated	Solid waste— IDAPA 58.01.06
Classified as a hazardous waste	Hazardous	Hazardous waste— IDAPA 58.01.05

IDAPA 58.01.06: <https://adminrules.idaho.gov/rules/current/58/580106.pdf>

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Hazardous wastes requires disposal at a Subtitle C Hazardous Waste facility. For more information, refer to the DEQ factsheet *Hazardous Waste Determinations*. If the sediment is classified as non-contaminated, disposal has no environmental restrictions. If sediments are classified as contaminated but not hazardous waste, they will need to be disposed in accordance with applicable solid waste requirements. However, local ordinances and permits for fill and site disturbance may apply.

For more information

For questions, contact the nearest DEQ regional office:

- Boise: (208) 373-0550
- Coeur d'Alene: (208) 769-1422
- Idaho Falls: (208) 528-2650
- State Office: (208) 373-0502
- Pocatello: (208) 236-6160
- Twin Falls: (208) 736-2190
- Lewiston: (208) 799-4370