



Description and Purpose

The construction and retrofit of bridges and retaining walls often include driving piles for foundation support and shoring operations. Driven piles are typically constructed of precast concrete, steel, or timber. Driven sheet piles are also used for shoring and cofferdam construction. Proper control and use of equipment, materials, and waste products from pile driving operations will reduce or eliminate the discharge of potential pollutants to the storm drain system, watercourses, and waters of the United States.

Suitable Applications

These procedures apply to all construction sites near or adjacent to a watercourse or groundwater where permanent and temporary pile driving (impact and vibratory) takes place, including operations using pile shells as well as construction of cast-in-steel-shell and cast-in-drilled-hole piles.

Limitations

None identified.

Implementation

- Use drip pans or absorbent pads during vehicle and equipment operation, maintenance, cleaning, fueling, and storage. Refer to NS-8, Vehicle and Equipment Cleaning, NS-9, Vehicle and Equipment Fueling, and NS-10, Vehicle and Equipment Maintenance.

Objectives

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | |
| SE | Sediment Control | |
| TR | Tracking Control | |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | <input checked="" type="checkbox"/> |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | <input checked="" type="checkbox"/> |
| Organics | |

Potential Alternatives

None



- Have spill kits and cleanup materials available at all locations of pile driving. Refer to WM-4, Spill Prevention and Control.
- Equipment that is stored or in use in streambeds, or on docks, barges, or other structures over water bodies should be kept leak free.
- Park equipment over plastic sheeting or equivalent where possible. Plastic is not a substitute for drip pans or absorbent pads. The storage or use of equipment in streambeds or other bodies of water must comply with all applicable permits.
- Implement other BMPs as applicable, such as NS-2, Dewatering Operations, WM-5, Solid Waste Management, WM-6, Hazardous Waste Management, and WM-10, Liquid Waste Management.
- When not in use, store pile-driving equipment away from concentrated flows of stormwater, drainage courses, and inlets. Protect hammers and other hydraulic attachments from runoff and runoff by placing them on plywood and covering them with plastic or a comparable material prior to the onset of rain.
- Use less hazardous products, e.g., vegetable oil, when practicable.

Costs

All of the above measures can be low cost.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and at two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Inspect equipment every day at startup and repair equipment as needed (i.e., worn or damaged hoses, fittings, and gaskets). Recheck equipment at shift changes or at the end of the day and scheduled repairs as needed.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.