

## NS-11 PILE DRIVING OPERATIONS

Refer to: ITD Standards and Specifications for Highway Construction, Section 505.



### BMP Objectives

- Perimeter Control
- Slope Protection
- Borrow and Stockpiles
- Drainage Areas
- Sediment Trapping
- Stream Protection
- Temporary Stabilizing
- Permanent Stabilizing

### Definition and Purpose

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

### Appropriate Applications

These procedures apply to construction sites near or adjacent to a watercourse or groundwater where pile driving operations (impact and vibratory hammer) take place, including operations using drill rigs for cast in place piles.

### Limitations

Drilled for pile installation may require drilling fluid.

### Recommendations

- Use drip pans or absorbent pads during vehicle and equipment maintenance, cleaning, fueling, and storage. Refer to NS-9 (Vehicle and Equipment Fueling) and NS-10 (Vehicle and Equipment Maintenance).
- Have spill kits and cleanup materials available at all locations of pile driving. Refer to WM-5 (Spill Prevention and Control).
- Keep equipment that is stored or in use in streambeds; or on docks, or other structures over water bodies, leak free.

- Park equipment over plastic sheeting or equivalent where possible. Plastic sheeting is not a substitute for drip pans or absorbent pads. The storage or use of equipment in streambeds or other bodies of water shall comply with all applicable permits.
- Implement other BMPs as applicable, such as NS-2 (Dewatering Operations), WM-6 (Solid Waste Management), and WM-11 (Liquid Waste Management).
- When not in use, store pile driving equipment away from concentrated flows of runoff, drainage courses, and inlets. Protect hammers and other hydraulic attachments from runoff by placing them on plywood and covering them with plastic or a comparable material prior to the onset of rain.

### **Maintenance and Inspection**

- Conduct inspections as required by the NPDES permit or contract specifications.
- Inspect equipment for drips and leaks regularly, cleaning up spills and drips immediately and repairing or replacing the source.

### **Additional Considerations**

Noise (ambient and/or underwater) monitoring may be required during pile driving operations if the activities have the potential to impact endangered species. Close coordination with the National Marine Fisheries Services and/or the U.S. Fish and Wildlife Service will dictate the need and associated parameters.