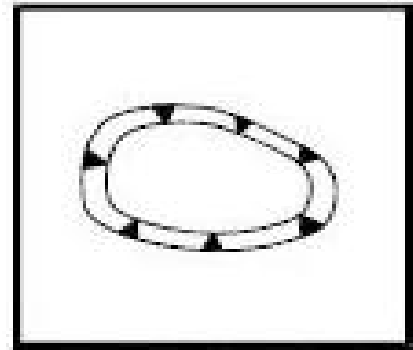


SC-10 SEDIMENT TRAP

Refer to: ITD Standard Specifications, Section 212.
ITD Standard Drawings P-1-C and P-1-D.



Standard Symbol

Definition and Purpose

A sediment trap is an impoundment created by a dam or an excavation for the purpose of storing water and settling sediment and other pollutants from surface runoff. It is designed to hold a specific amount of water until the water can evaporate or infiltrate. Usually the trap is designed to have overflow to a receiving conveyance system when the water level exceeds the basin capacity.

Appropriate Applications

- Sediment traps may be used on construction projects where the drainage area is less than 5 acres. Traps should be placed where sediment-laden stormwater would enter a storm drain or watercourse.

Limitations

- Requires large surface areas to permit infiltration and settling of sediment.
- May present a drowning hazard. Protective fencing and warning signs should be considered if there is the potential for unauthorized persons at the trap site.
- Not to be located in live streams.

Design Parameters

- The trap must be designed to meet applicable local ordinance.
- Sediment traps shall be constructed prior to the rainy season and construction activities.
- Trap shall be situated according to the following criteria: (1) by excavating a suitable area or where a low embankment can be constructed across a swale, (2) where failure would

BMP Objectives	
<input checked="" type="checkbox"/>	Perimeter Control
<input type="checkbox"/>	Slope Protection
<input type="checkbox"/>	Borrow and Stockpiles
<input checked="" type="checkbox"/>	Drainage Areas
<input checked="" type="checkbox"/>	Sediment Trapping
<input checked="" type="checkbox"/>	Stream Protection
<input type="checkbox"/>	Temporary Stabilizing
<input type="checkbox"/>	Permanent Stabilizing

not cause loss of life or property damage, (3) to provide access for maintenance, including sediment removal and sediment stockpiling in a protected area, and (4) where infiltration will not negatively impact groundwater.

- On projects with Construction General Permit (CGP) coverage, traps shall be sized to retain, at a minimum, the 2 yr, 24 hour storm or 3,600 cubic feet per acre of contributing drainage area. Multiple traps and/or additional volume may be required to accommodate site-specific rainfall and soil conditions. (Reference 1)
- The volume of impounded water shall infiltrate within 72 hours so as not to produce a public nuisance by causing a vector issues associated with standing water, unless specified differently in local ordinance.
- The length to width ratio should be at least 2:1.
- Side slopes should be gentle (3:1 or flatter). Steep slopes create a greater potential for erosion and sloughing inside the basin and an increased safety hazard.
- Minimum top width of the embankment should be 6ft. (Reference 2)
- Some traps may be regulated as “dams” by the Idaho Department of Water Resources (IDWR). Coordination with IDWR is required prior to construction of a “dam”. See Table 1 to determine if a proposed design would be regulated. (Reference 3)
- A sediment basin may be considered a “Shallow Injection Well” and be subject to additional regulation if the dug or drilled depth is greater than the largest surface dimension, it is an improved sink hole, or it has a subsurface fluid distribution system. (Reference 4)
- The design shall include maintenance requirements, including sediment removal, to ensure continuous function of the trap.
- Rock or vegetation shall be used to protect the trap overflow against erosion. The entire trap may be lined with rock or geotextile, if necessary.

Table 1. (Provided by IDWR)

MATRIX SERVES ALL HYDRAULIC BARRIERS *		H E I G H T O F B A R R I E R		
		Less than 6.0 Feet	6 -to- 10 Feet	10 Feet or More
		S T O R A G E	Less than 10.0 Acre-Feet	NO
10 -to- 50 Acre-Feet	NO		NO	YES
50 Acre-Feet or More	NO		YES	YES

*** Note: In general accordance w/ Idaho Code 42.1709, any Significant or High Hazard structure may be regulated on a case-by-case basis regardless of height or storage capacity**

Maintenance and Inspection

- Conduct inspections as required by the NPDES permit or contract specifications.
- If captured stormwater has not completely infiltrated within 72 hours, then dewater the sediment trap using an approved method.
- Repair damage and remove obstructions as needed or as directed by the Engineer.

- Remove accumulated sediment when the volume of sediment has reached one-half the designed trap volume. (Reference 1)
- Properly dispose of sediment and debris removed from the trap.

References:

- 1) U.S. Environmental Protection Agency, Construction General Permit 2012, Section 2.1.3.2.
- 2) Natural Resources Conservation Services, Conservation Practice Standard, *Pond*, Code 378, May 2011.
- 3) Idaho Statutes, Title 42 Irrigation and Drainage – Water Rights and Reclamation, Chapter 17 Department of Water Resources – Water Resource Board, Section 42-1711.
- 4) Idaho Department of Water Resources, Idaho Department of Water Resources Memo for Shallow Injection Well Criteria, Effective date 1 July 2011.