

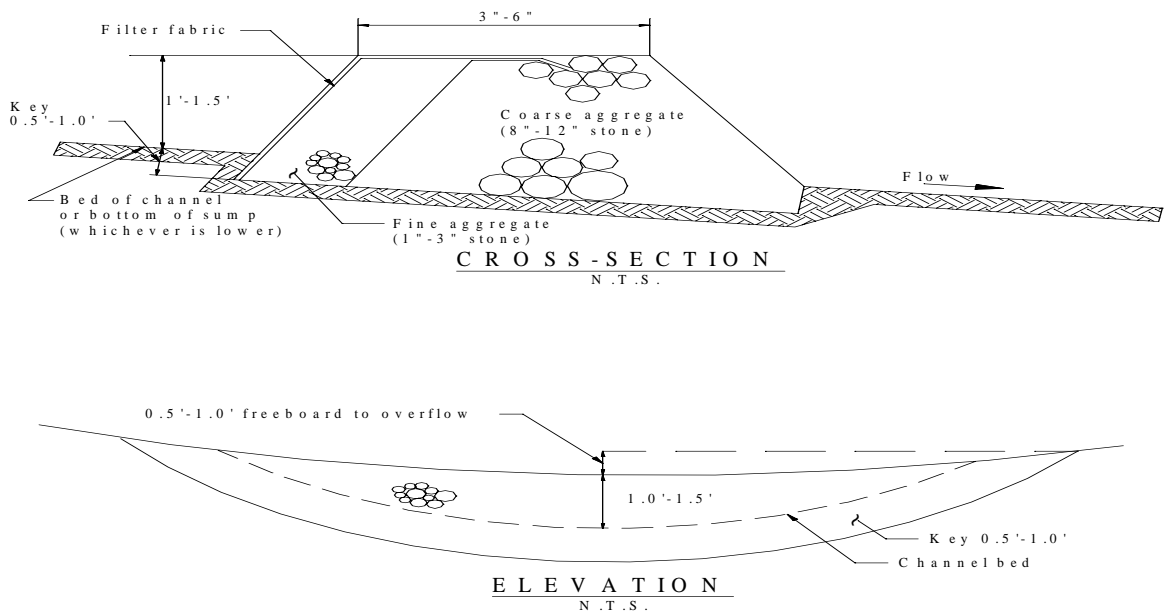


Oak Park Conservancy District Stormwater Best Management Practices (BMPs) Sediment Management Practices (SMPs)		SMP-01														
Activity: Check Dams																
PLANNING CONSIDERATIONS: Design Life: 6 mo – 1 year Acreage Needed: Minimal Estimated Unit Cost: Approx: \$100/dam Monthly Maintenance: 60% of Installation																
	CD															
	Target Pollutants															
	<table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">Significant ♦</td> <td style="text-align: center;">Partial ♦</td> <td style="text-align: center;">Low or Unknown ♦</td> </tr> <tr> <td style="text-align: center;">Sediment ♦</td> <td style="text-align: center;">Heavy Metals ♦</td> <td style="text-align: center;">Nutrients ♦</td> </tr> <tr> <td style="text-align: center;">Oil & Grease ♦</td> <td style="text-align: center;">Bacteria & Viruses ♦</td> <td style="text-align: center;">Floatable Materials ♦</td> </tr> <tr> <td></td> <td style="text-align: center;">Oxygen Demanding Substances ♦</td> <td style="text-align: center;">Toxic Materials ♦</td> </tr> <tr> <td></td> <td style="text-align: center;">Construction Waste ♦</td> <td></td> </tr> </table>		Significant ♦	Partial ♦	Low or Unknown ♦	Sediment ♦	Heavy Metals ♦	Nutrients ♦	Oil & Grease ♦	Bacteria & Viruses ♦	Floatable Materials ♦		Oxygen Demanding Substances ♦	Toxic Materials ♦		Construction Waste ♦
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Description	To reduce the velocity of concentrated stormwater flows, small temporary constructions such as dams are built across swale or drainage ditch. This construction reduces erosion and promotion of sedimentation behind the dam.															
Suitable Applications	<ul style="list-style-type: none"> ➤ Reduction of velocity flow in small intermittent channels and swales. ➤ Weekly collection of sediment materials to avoid scour and re-suspension. ➤ Used in conjunction with filter fabric on upstream end. ➤ Areas which equal 10 ac (4 ha) or less. ➤ To protect against erosion and reduce stormwater run-off in steep channel areas. ➤ During the establishment of grass lining in drainage ditches or channels Installation of erosion-resistant lining is not allowed for short length of service for temporary ditches or channels. ➤ Not for use in streams or rivers. 															
Approach	<ul style="list-style-type: none"> ➤ Log check dams ➤ Rock check dams ➤ Sand bags (filled with pea gravel) 															

Activity: Check Dams**Installation Procedures**

Check dams should be properly constructed to reduce chances of flooding or washout. These dams can be constructed of rock or logs or other sturdy material available on the worksite and should be properly maintained. Material such as straw bales, silt fences or like porous materials should never be used to construct check dams.

- Pools 1 to 2 ft deep should be able to form between each check dam.
- Rock check dams should be placed by hand or mechanically and should be constructed with 1"-3" rock.
- Backwater from a downstream check dam should reach but not exceed the toe of the upstream check dam.
- Check dams should be keyed into, or inset into, the swale/channel bottom.
- Filter fabric should be placed on the upstream face. Major floods (2-year storm or larger) should safely flow over the check dam without an increase in upstream flooding or destruction of the check dam.
- Primarily used in small, steep channels where velocities exceeding 2 ft/s (0.61 m/s) need to be reduced.
- A sump may be provided immediately upstream of the check dam to capture sediment.
- Check dams may be built of stone or logs, which are secured against damage during significant floods.
- Rock shall be individually placed by hand or by mechanical methods (no dumping of rock) to achieve complete ditch or swale coverage.
- If grass is planted to stabilize the ditch or swale, the check dam should be removed when the grass has matured (unless the slope of the swale/ditch is greater than 4 percent).

Activity: Check Dams	SMP-01
<p data-bbox="277 331 428 363">Maintenance</p> <ul data-bbox="472 331 1393 468" style="list-style-type: none"><li data-bbox="472 331 1256 363">➤ Inspection of sediment and erosion behind check dam after each rain.<li data-bbox="472 365 1393 432">➤ Lift filter fabric and shovel or backhoe silt whenever sediment reaches one-half the sump depth of the dam.<li data-bbox="472 434 1365 468">➤ Check area once a week on active sites and every two weeks on in-active sites. <p data-bbox="277 506 402 569">Inspection Checklist</p> <ul data-bbox="472 516 1295 768" style="list-style-type: none"><li data-bbox="472 516 1247 550">❑ Diameters of 1" to 3" (2.5 cm to 7.6 cm) should use crushed stone.<li data-bbox="472 560 1068 594">❑ Check dam spans the entire width of the channel.<li data-bbox="472 604 846 638">❑ Sump is 12" (30.5 cm) deep.<li data-bbox="472 648 1084 682">❑ Filter fabric on upstream face is keyed into the bed.<li data-bbox="472 693 1013 726">❑ Check dams can be removed when needed.<li data-bbox="472 737 1295 770">❑ Sites with rain accumulation of 0.5" should be checked within 24 hours.	