Water and Sediment Control Basin...an earth embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin

Water and sediment control basin

Purposes

- ☑ **To improve the ability to farm sloping land**
- ☑ **To reduce watercourse and gully erosion**
- ☑ **To trap sediment**
- ☑ **To reduce and manage onsite and downstream runoff**
- ☑ **To improve downstream water quality**

Benefits

Basins can be effective in reducing sedimentation of nearby waters, especially in areas where residue management or other practices are impractical.

Applications

This practice applies to sites where the topography is generally irregular, and runoff, sediment, and watercourse or gully erosion have damaged the land or land improvements. This practice is not applicable if the present watercourse is capable of handling concentrated runoff without serious erosion.

Design and Installation

A water and sediment control basin is generally installed on land that is relatively steep and undulating. It traps water and sediment running off cropland upslope from the structure, and reduces gully erosion by controlling flow within the drainage area. The basin releases water slowly, usually through infiltration or a pipe outlet and tile line. Ideally, a buffer of permanent grass is seeded and maintained around the riser to trap sediments.

The area draining to the basin shall not exceed 40 acres, and the basin should be large enough to control runoff from a 10-year, 24-hour storm. The location (and spacing of multiple basins, if applicable) depends on slope, tillage and crop management. In addition, erosion control practices may be needed upslope to prevent excess sedimentation, and installation of this practice should not destroy important woody wildlife cover. Consult an NRCS conservationist for site-specific information.

Maintenance

To help prevent sheet and rill erosion and sedimentation, maintain vegetation on embankment slopes. Reseed vegetation and fertilize as needed.

Check the basin after large storms to determine the need for sediment removal. Repair all broken or damaged inlets and underground inlets, and make any needed repairs to the embankment as soon as possible to prevent major damage.

Relative Cost

Installation	**low**	●●●○○	**high**
Maintenance	**low**	●●○○○	**high**

For Additional Information…

Visit the Minnesota NRCS office online at http://www.mn.nrcs.usda.gov/, see the Minnesota Field Office Technical Guide (FOTG) standard for (638) Water and Sediment Control Basin, or contact your local USDA-NRCS office.

Local USDA-NRCS contact information

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