



# Source Control Strategies for Ditches



Fact Sheet A4

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## What is Source Control?

Source control refers to practices that prevent or reduce pollutant generation rather than treating or removing pollutants already captured by stormwater runoff. Methods for preventing pollutants from entering a ditch and preventing generation of pollutants in a ditch are described in this fact sheet.

## Prevent Pollutants from Entering a Ditch

Method	Description
Manage Soil Erosion from Uplands	Minimize sediment entering ditches by controlling soil erosion at the source through increased infiltration or sediment management practices such as: <ul style="list-style-type: none"><li>● No-till or conservation tillage</li><li>● Direct seeding</li><li>● Contour farming</li><li>● Field borders</li><li>● Contour buffer strips</li><li>● Design of agricultural ditches to avoid pollution sources</li><li>● Cover crops</li></ul>
Designate a Ditch Buffer	Restrict or exclude agricultural crop and livestock production from the public road right-of-way and its associated roadside ditch to prevent direct applications of fertilizer, manure, or pesticides in the ditch zone.
Street Sweeping	Perform street cleaning (typically sweeping with a regenerative air or vacuum sweeper) to clean the adjacent roadway surface and to reduce sediment loading into ditches.
Catch Basin Cleaning	Clean catch basins that may be associated with a ditch inlet to reduce sediment loading into ditches.





## Prevent Generation of Pollutants in a Ditch

Method	Description
Minimize Cleaning Activities During the Wet Season	Conduct ditch maintenance in the later spring, summer, or early fall, where possible to allow re-establishment of vegetative cover and minimize erosion.
Control Sediment Loading During Vegetation Establishment	Install preventative measures (e.g., check dams, straw mulch, or silt fence) to reduce downstream sediment loading while establishing new vegetation. Seed and/or plant during the following optimum windows: <ul style="list-style-type: none"> <li>● Late spring (April 1 through June 30)</li> <li>● Early fall (September 1 through October 1)</li> </ul>
Eliminate or Reduce Herbicide Use	Use physical and/or mechanical methods of vegetation removal rather than applying herbicides, where practical. If herbicides must be used, apply early in the summer.

## Why is Source Control Important?

Source control is the first step in reducing pollutant loads that enter ditches or are generated in ditches through installation and maintenance activities. The goal of source control is to implement cost-effective approaches to improve stormwater runoff quality. Source control strategies may result in an improvement in water quality in ditches without installing more costly treatment practices downstream.

## When is Source Control Needed?

- When ditches receive direct runoff from pollutant-generating land uses such as agricultural fields.
- When ditches lack natural buffers to prevent stormwater runoff with high pollutant loads from entering ditches.
- When routine maintenance such as ditch cleaning, ditch reshaping/grading, and vegetation establishment is being implemented.



## Additional Resources

- Guidelines for Stream and Ditch Maintenance (Oregon Department of Agriculture, 2018): [www.oregon.gov/ODA/shared/Documents/Publications/NaturalResources/GuidelinesStreamDitchMaintenance.pdf](http://www.oregon.gov/ODA/shared/Documents/Publications/NaturalResources/GuidelinesStreamDitchMaintenance.pdf)
- Re-plumbing the Chesapeake Watershed: Improving Roadside Ditch Management to Meet TMDL Water Quality Goals (Schneider and Boomer, 2016): [www.chesapeake.org/pubs/349\\_Boomer2016.pdf](http://www.chesapeake.org/pubs/349_Boomer2016.pdf)
- Draft Options for Crediting Pollutant Reduction from Roadside Ditch Management Practices (RDM) in the Chesapeake Bay Watershed (Chesapeake Bay Roadside Ditch Management Team, 2017): [www.chesapeakebay.net/channel\\_files/24809/attach\\_b\\_062017\\_rdm\\_memo\\_draft.pdf](http://www.chesapeakebay.net/channel_files/24809/attach_b_062017_rdm_memo_draft.pdf)
- Drainage water management for water quality protection (Strock et al., 2010): [www.jswconline.org/content/65/6/131A.full.pdf#establishment](http://www.jswconline.org/content/65/6/131A.full.pdf#establishment).

