Land Disturbance Pollution Control

Employee Training Series

Green Country Stormwater Alliance

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Land Disturbances

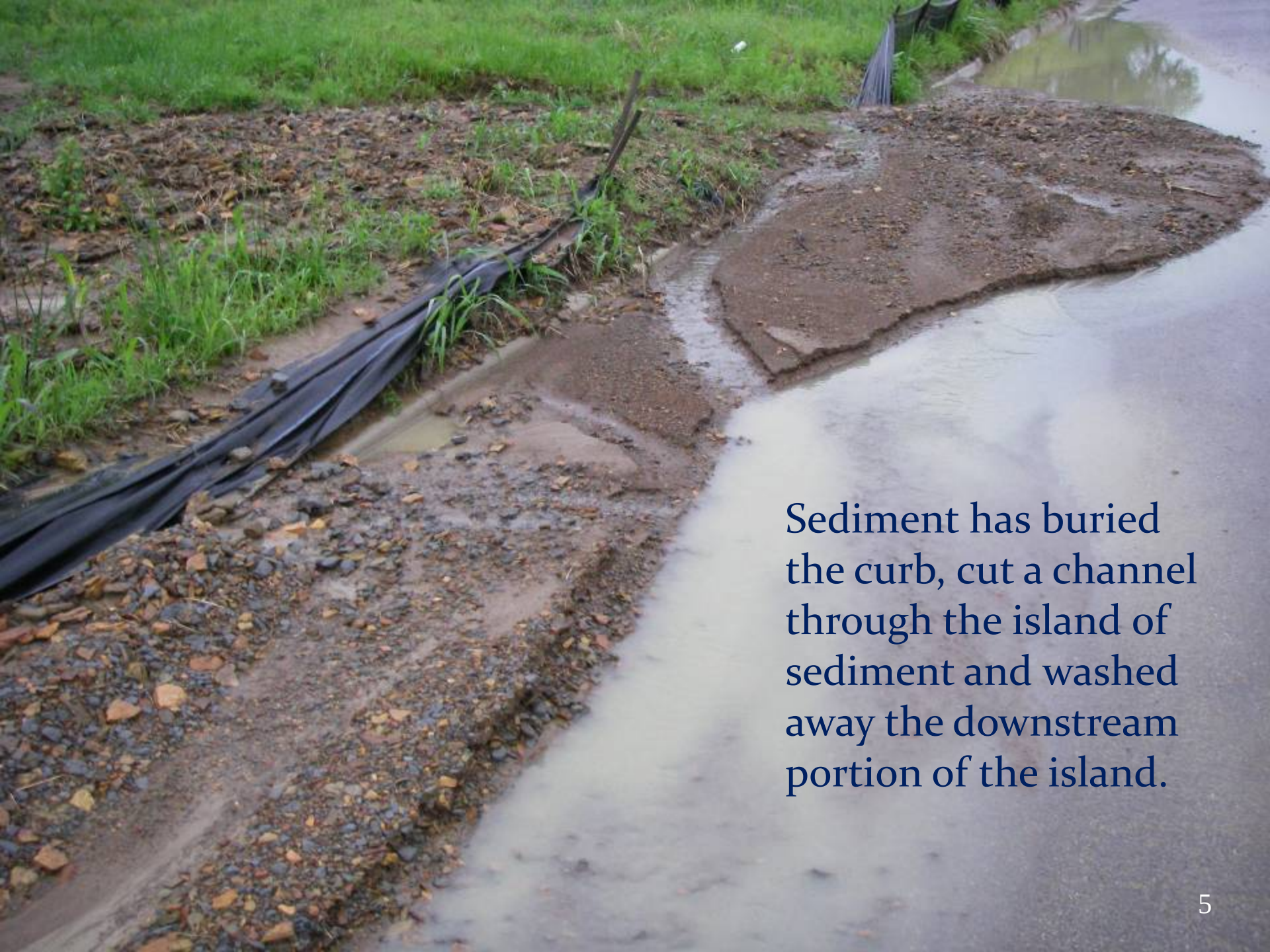
This presentation provides suggestions for:

- Utility repairs
  - water and sanitary sewer lines
  - storm drain system
- Street repairs
- Sidewalk construction and repairs
- Landscaping (parks, buildings, medians)
- Power pole installation and replacement

Land Disturbances

Keeping chemicals, dirt and debris out of the storm drain system will reduce water pollution.

Even two silt fences won't work if they are not maintained. The vegetation growing on the silt indicates this has been going on for sometime.



Sediment has buried the curb, cut a channel through the island of sediment and washed away the downstream portion of the island.

These photos were taken on May 5, 2008.

These photos were taken on June 20, 2008 (43 days later) at the same site.

More bad examples.

This is why straw bales are no longer acceptable.

Good examples.

Land Disturbances

- Note: Projects that disturb one acre or more must comply with the state's OKR10 storm water permit for construction activities.
- If a permit is required, your supervisor, stormwater or environmental coordinator will provide specific instructions.

Land Disturbances

- All projects must be managed to prevent or reduce soil or other pollutants from being washed into storm drains, creeks or lakes.
- In addition to soil, other potential pollutants on construction sites include trash, debris, oil, grease, lime, concrete truck wash water, etc.
- When doing site inspections, look around. Many problems are obvious.

Definitions

- Erosion - the removal or wearing away of soil due to the action of water (or wind).
- Sediment - soil particles that settle out of flowing water.

Typical stream bank erosion problems.

General Principles

- Preventing erosion is more effective than trying to remove sediment from runoff (source control).
- Minimize the amount of disturbed area.
- Divert runoff or flowing water away from disturbed areas.

General Principles

- Locate dirt stockpiles out of the street and away from runoff or flowing water to prevent sediment from washing into storm drains.
- Cover stockpiles or provide a barrier such as a berm or silt fence around the pile.

Best Management Practices

Best Management Practices (BMPs) are tools used to reduce or prevent water pollution.

- Erosion Control BMPs are used to protect disturbed soils and prevent them from being washed away by rainfall and/or runoff.
- Sediment Control BMPs are used to trap sediment carried by runoff and keep it on the construction site.
- Waste Management BMPs are good housekeeping practices to control trash, chemicals and debris.

Best Management Practices

Erosion Control BMPs:

- Vegetation - grasses or other plants that provide erosion protection.
- Mulching - a layer of straw, wood or synthetic material that covers the loose soil.

Best Management Practices

Erosion Control BMPs:

- Erosion control blankets - mesh matting made of straw, wood fiber or plastic.
- Plastic sheeting - may be used for short-term protection of disturbed areas or dirt stockpiles.

Best Management Practices

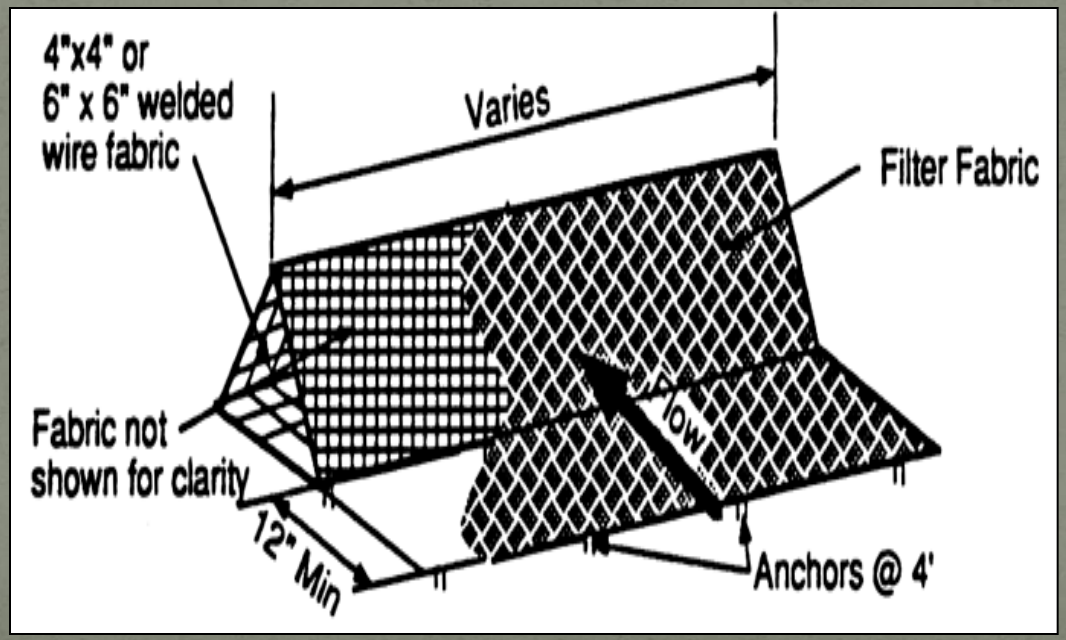
Sediment Control BMPs:

- Sediment Pond – a pond used to detain water and allow sediment to settle out.
- Silt fence - filter fabric trenched into the soil and attached to supporting posts.

Best Management Practices

Sediment Control BMPs (continued):

- Triangular sediment dike - filter fabric placed over welded wire or foam shaped into a triangle.



Best Management Practices

Sediment Control BMPs (continued):

- Inlet protection – Concrete blocks and stone placed around or in front of a storm drain

Best Management Practices

Waste Management BMPs:

- Debris and trash control - use covered trash cans, bins and/or roll-off boxes for debris and trash disposal.

Best Management Practices

Waste Management BMPs:

- Chemical management - follow proper material storage and spill cleanup procedures for chemicals used on construction sites.

Secondary containment makes it easier to recover spilled material.

Best Management Practices

Waste Management BMPs:

- Concrete washout - capture wash water from concrete truck cleaning at designated locations to prevent wash water runoff from entering the storm water system.

Land Disturbance Pollution Control

Protecting water quality requires that all employees do their part to prevent storm water pollution.