

# Module 7

## Post-Construction Inspections of 15 Non-Proprietary BMPs

# Module 7 Contents

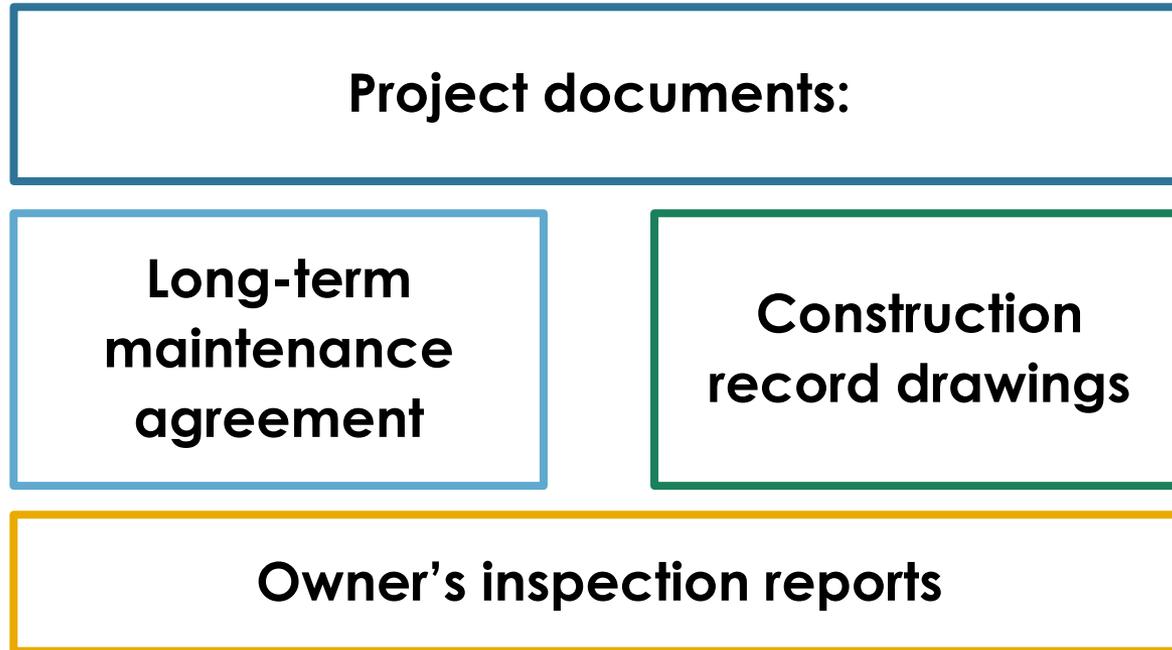
7a. Overview

7b. Common BMP Maintenance Issues

# Module 7a.

## Overview

# Overview



# Long-Term Maintenance Agreement

- Requires the owner to ensure stormwater management facilities are inspected and maintained

# Suggested Owner Inspection Frequency

(Table 7.1)

- ✓ Monthly
- ✓ 24 hours of > 1-inch rainfall event
- ✓ Twice after >1.5 inch rainfall event during first 6 months

Constructed Stormwater Wetlands  
Wet Ponds  
Wet Extended Detention Basins  
Bioretention Cells

- ✓ Quarterly
- ✓ 24 hours of > 1-inch rainfall event

Level Spreaders  
Infiltration Devices/Filter Practices  
Dry Extended Detention Basins  
Permeable Pavement  
Rain Tanks and Cisterns  
Vegetated Roofs  
Filter Strips\*/Wet and Dry Swales\*  
Grass Channels\*  
Rest. Riparian Buffers\*

# Construction Record Drawings

- Document condition of facility when installed
- Reference during inspections
- Compare to conditions during inspection

**AS - BUILT DRAWINGS**

# Owner's Inspection Reports

- How effective are owner's inspections?
- Regular maintenance of BMPs occurring?

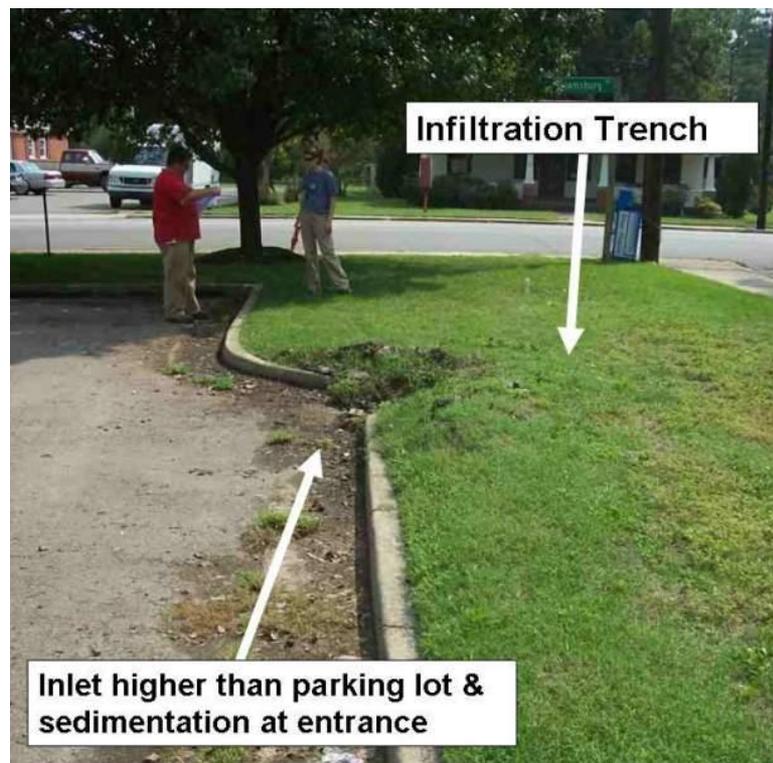


# Module 7b.

## Common BMP Maintenance Issues

# Deviation From Construction Record Drawing

- Encroachments in the BMP
- Incorrect vegetation
- Incorrect sizing
- Grading problems



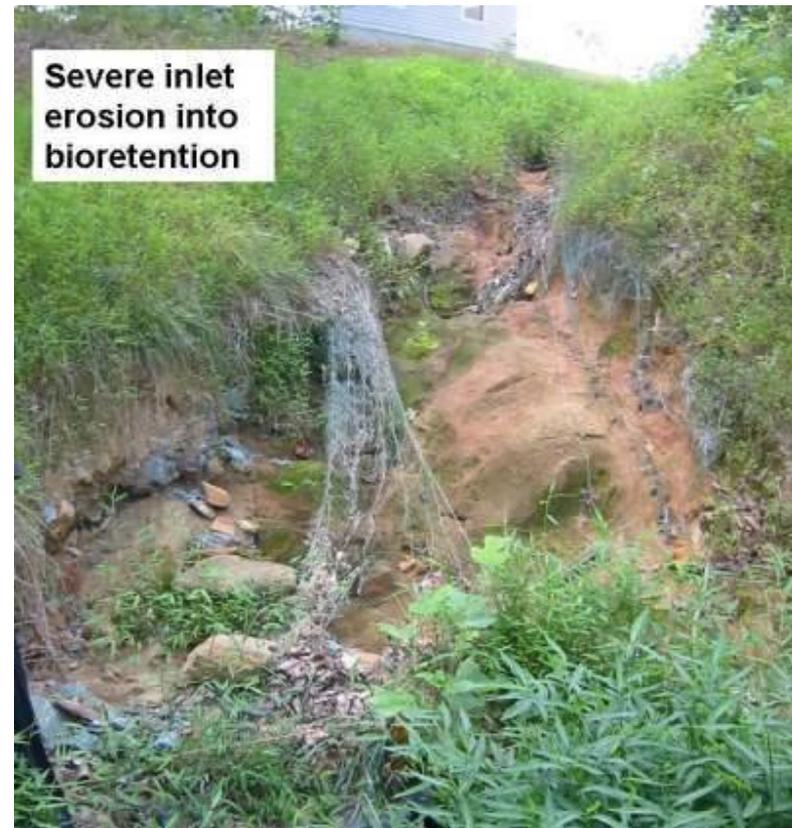
# Debris and Litter

- Clogging
- Damage to vegetated areas
- Stagnant pool formation
- Mosquito habitats
- Excessive surface algae
- Decreased facility aesthetics



# Erosion

- Sediment clogging
- Unstable banks
- Diminished structural integrity of an embankment from animal burrows
- Sinkholes on embankments or basin and channel bottoms



# Sediment Buildup

- Reduced effectiveness of pretreatment practice
- Blockage at inlet
- Reduced infiltration rates



# Vegetation

- Erosion
- Excessive sediment accumulation
- Reduced pollutant removal



# Common BMP Maintenance Issues

## Common Maintenance Issues

Table 7.2

Type of Practice	Key Maintenance Considerations
Stormwater Ponds Wetlands	<ul style="list-style-type: none"> <li>• Sediment build-up</li> <li>• Woody vegetation on dam</li> <li>• Slumping, animal burrows, and seepage associated with dam</li> <li>• Clogging of orifices</li> <li>• Unauthorized access to deep water areas, risers, pipes, and</li> <li>• Overgrown vegetation and trash</li> <li>• Standing water and mosquito habitat (mostly associated with dry extended detention ponds)</li> </ul>

# Module 7c.

## Post-Construction Inspections of 15 Non-Proprietary BMPs

## Problems

- Encroachments
- Runoff is not entering the receiving pervious area



## Problems

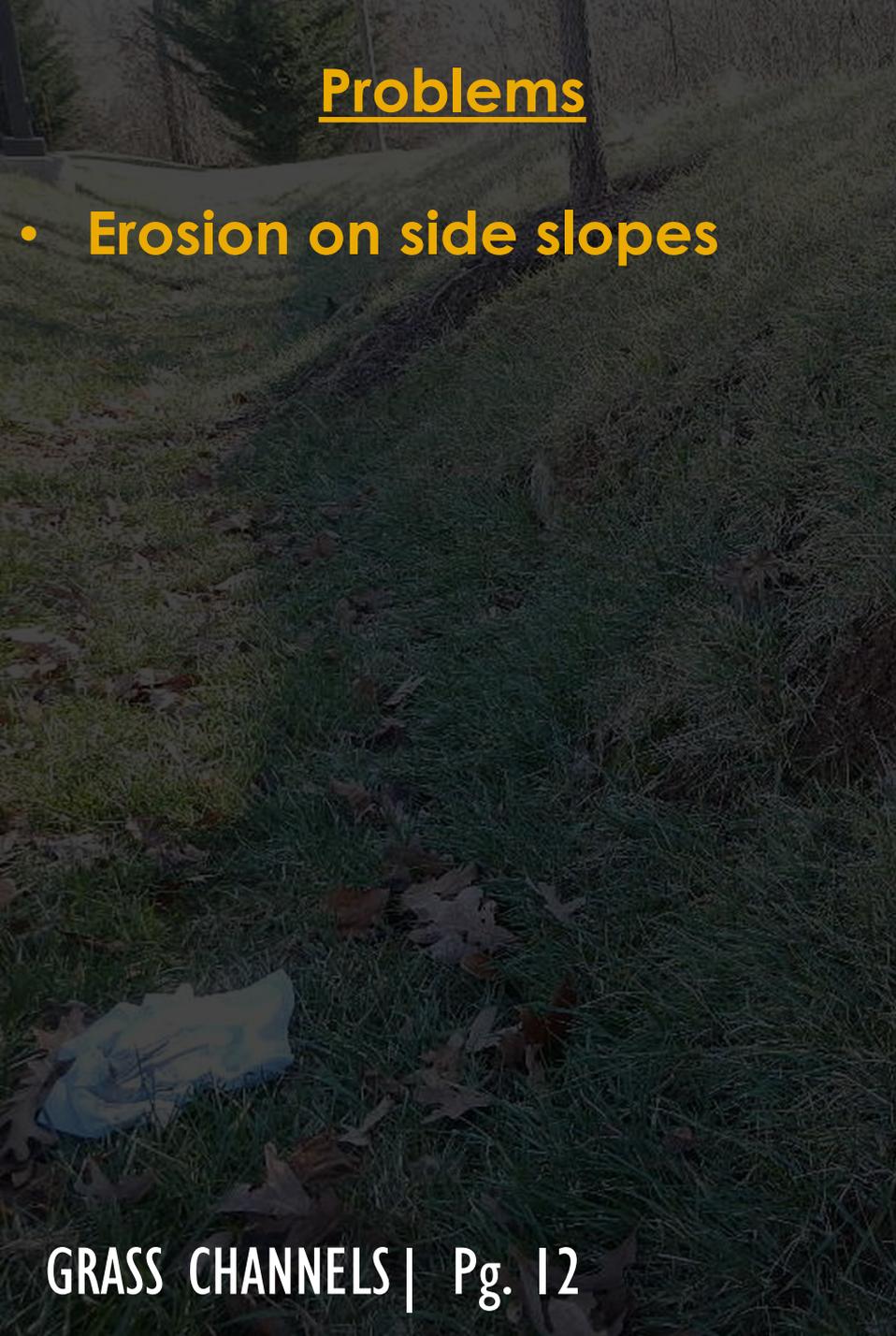
- Sediment buildup



SHEET FLOW TO VEGETATED FILTER STRIP  
OR CONSERVED OPEN SPACE | Pg. 11

## Problems

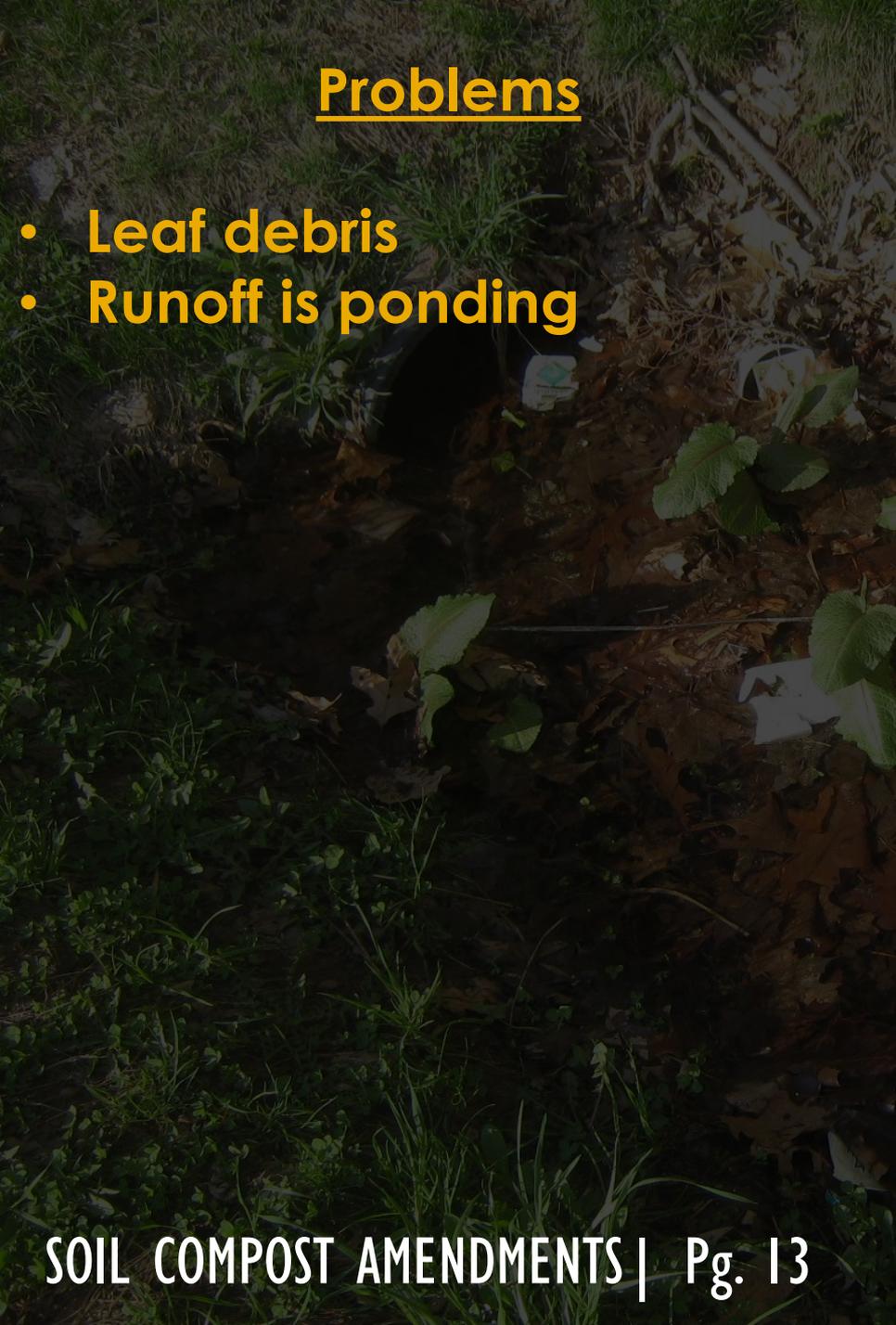
- Erosion on side slopes



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## Problems

- Leaf debris
- Runoff is ponding



## Problems

- Plant cover is less than 90%



## Problems

- Gutters are clogged



## Problems

- Sediment deposition
- Organic debris on surface



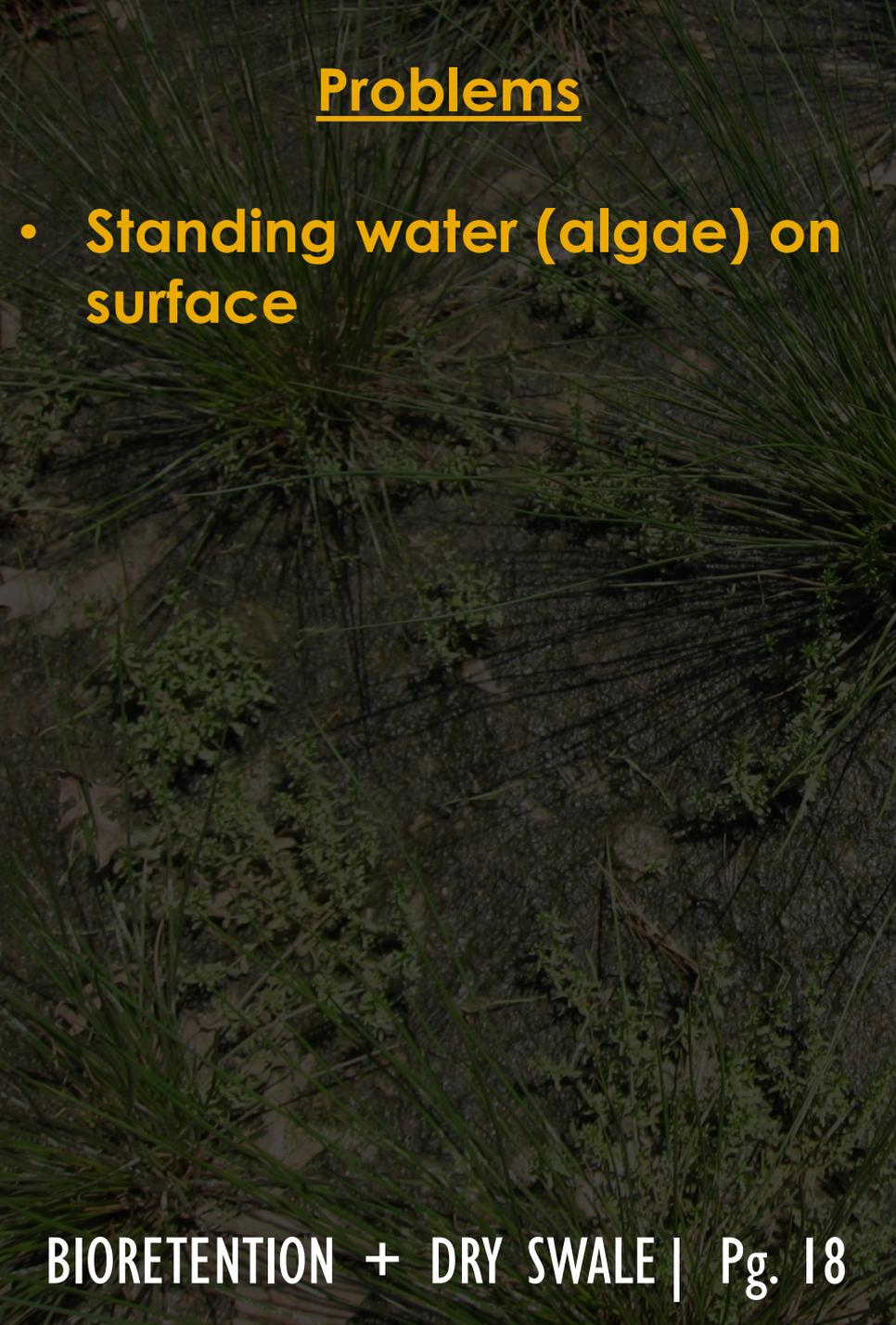
## Problems

- Standing water in observation well



## Problems

- Standing water (algae) on surface



## Problems

- Erosion in grass filter strip



## Problems

- Uneven turf cover (maybe caused by standing water)



## Problems

- Check construction record drawing to see if stormwater should enter as sheet flow

CONSTRUCTED WETLANDS +  
WET SWALES | Pg. 21



## Problems

- Vegetative growth on riser structure



## Problems

- Excessive algae growth

## Problems

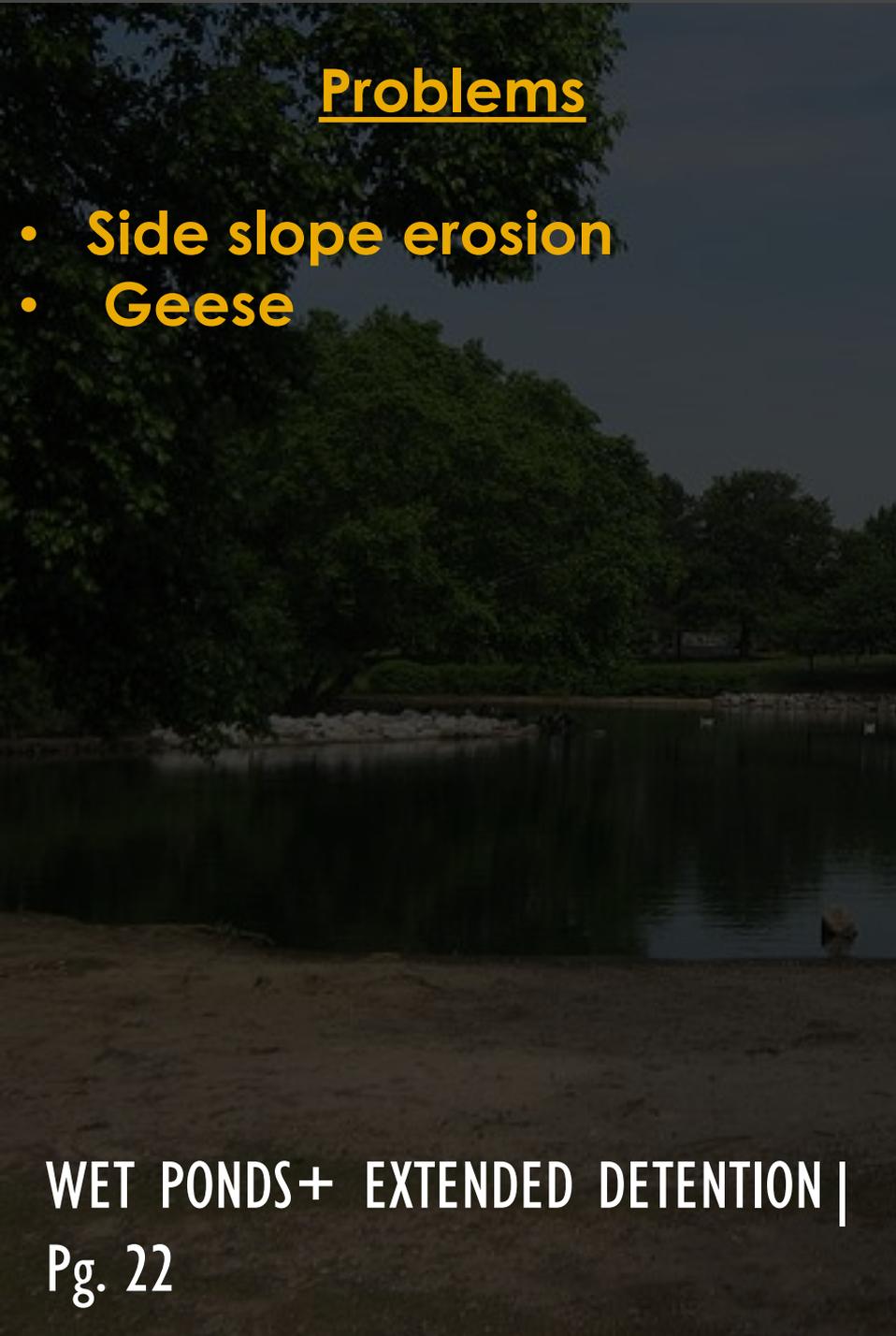
- Clogged water quality orifice



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## Problems

- Side slope erosion
- Geese



WET PONDS+ EXTENDED DETENTION |

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# Questions?

## Photo credits

Center for Watershed Protection: Slides 11, 13-15, 25

Stormwater Maintenance LLC: Slides 12, 18-24, 27-33