Introduction to Illicit Discharges

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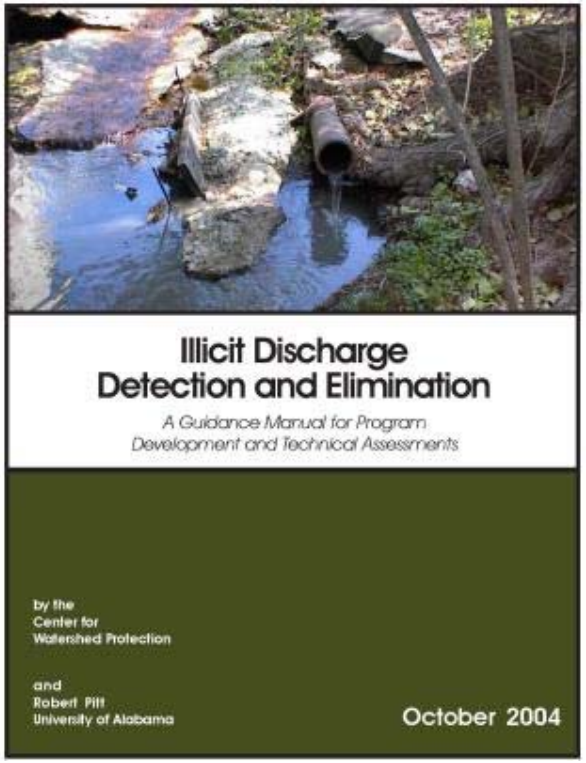
IDDE Guidance Manual

- Joint EPA-funded project between CWP and University of Alabama
- 8 Program Components
- Desktop Methods
- Field and Lab Protocols
- Model Ordinance
- Technical Appendices
- Download at www.cwp.org



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Presentation Overview

- What are Illicit Discharges?
- A few Key Terms for Today
- Impacts on Water Quality

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What is an Illicit Discharge?

- A discharge to an Municipal Separate Storm Sewer (MS4) that is not composed entirely of storm water except permitted discharges and fire fighting related discharges

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What is a Storm Sewer?

- Enclosed pipe or open channel
- Legal Definitions:
  - Major outfall = enclosed storm drain pipes 36 inches or greater in diameter & open channels that drain more than 50 acres
  - For industrial land uses, major outfall = enclosed storm drain pipes 12 inches or greater in diameter & open channels that drain more than 2 acres
- Minor storm outfalls are smaller than these thresholds

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Sources of Illicit Discharges

- Illegal dumping practices
- Broken sanitary sewer line
- Cross-connections
- Connection of floor drains to storm sewer
- Sanitary sewer overflows
- Straight pipe sewer discharge
- Failing septic systems
- Improper RV waste disposal
- Pump station failure

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Discharge Frequency

- **Continuous discharges**
  - Occur ***most or all of the time***
- **Intermittent discharges**
  - Occur over a ***shorter period of time*** (e.g., a few hours per day or a few days per year)
- **Transitory discharges**
  - ***Occur rarely***, usually in response to a singular event such as an industrial spill, ruptured tank, sewer break, transport accident or illegal dumping episode

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Discharge Flow Types

- Sewage & septage flows
- Washwater flows
- Liquid wastes
- Tap water *
- Landscape irrigation flows *
- Groundwater & spring water flows *

* Not typically considered illicit

Mode of Entry

- ***Direct entry***
  - Sewage, industrial, commercial cross-connection
  - Straight pipe

- ***Indirect entry***
  - Groundwater seepage
  - Spills
  - Dumping
  - Outdoor washing activities
  - “Nuisance” or non-target water

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Land Use & Potential Generating Sites

- Residential
- Commercial
- Industrial
- Institutional
- Municipal

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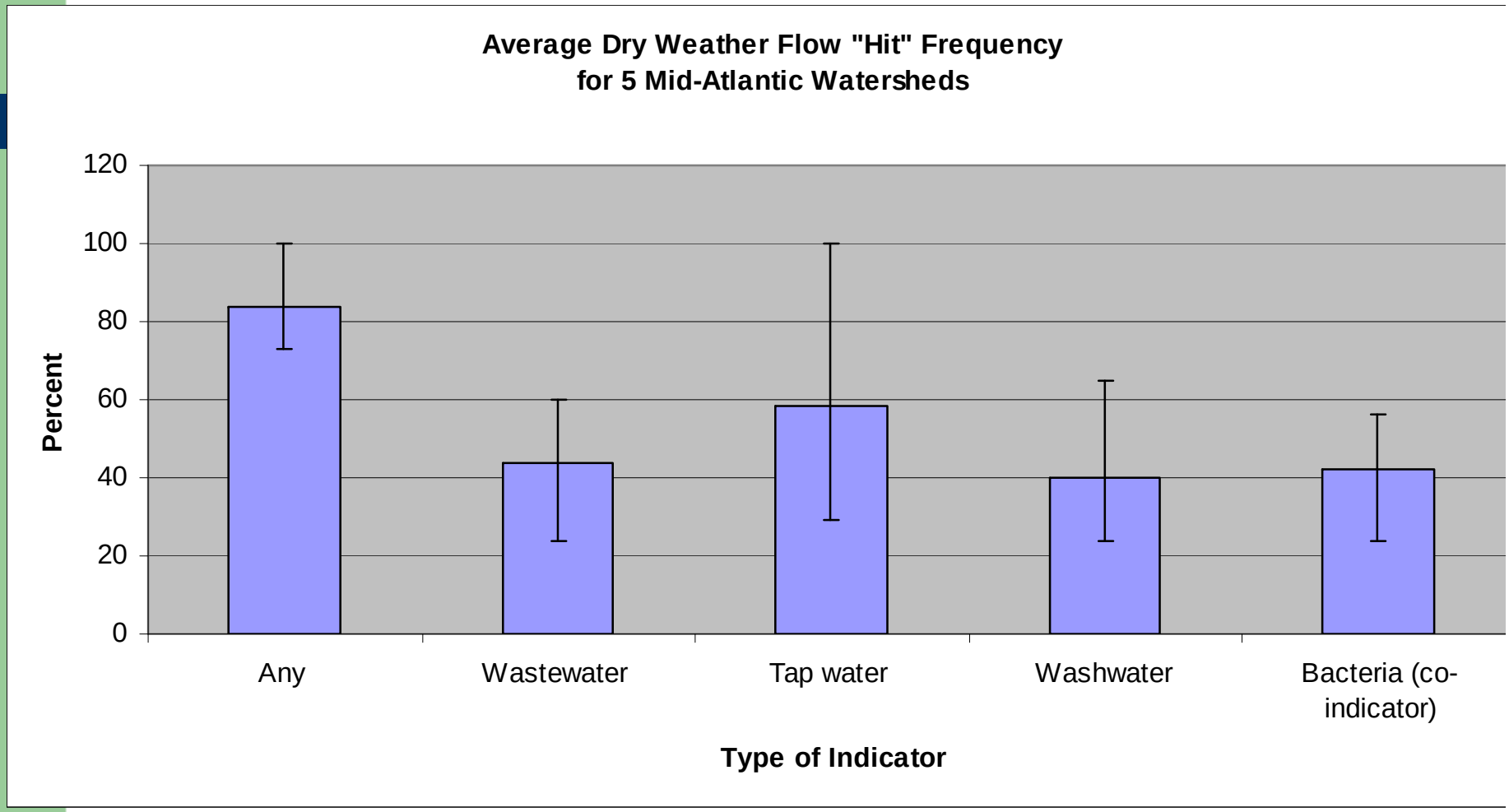
27-40% of outfalls have dry weather flow



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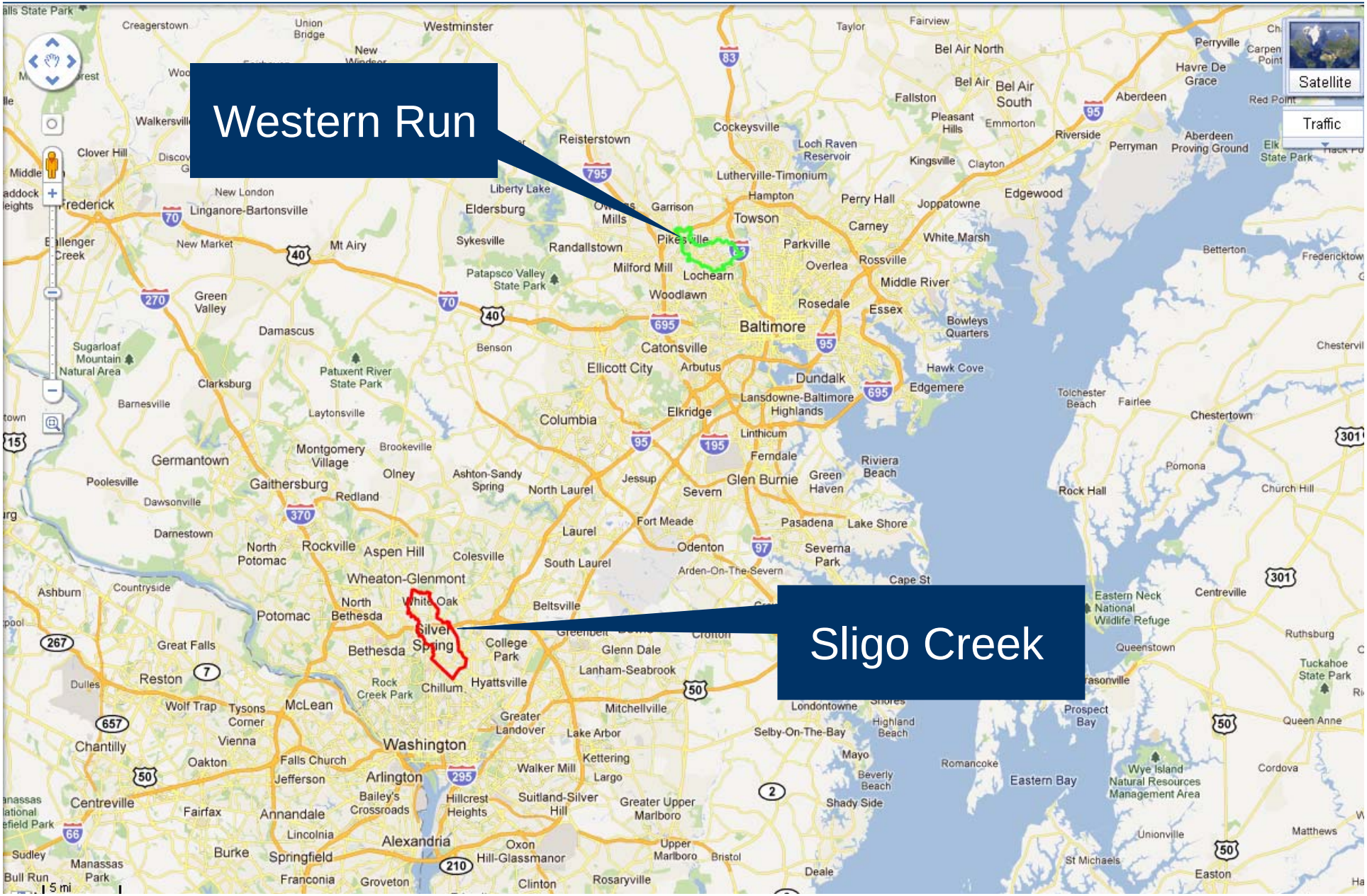
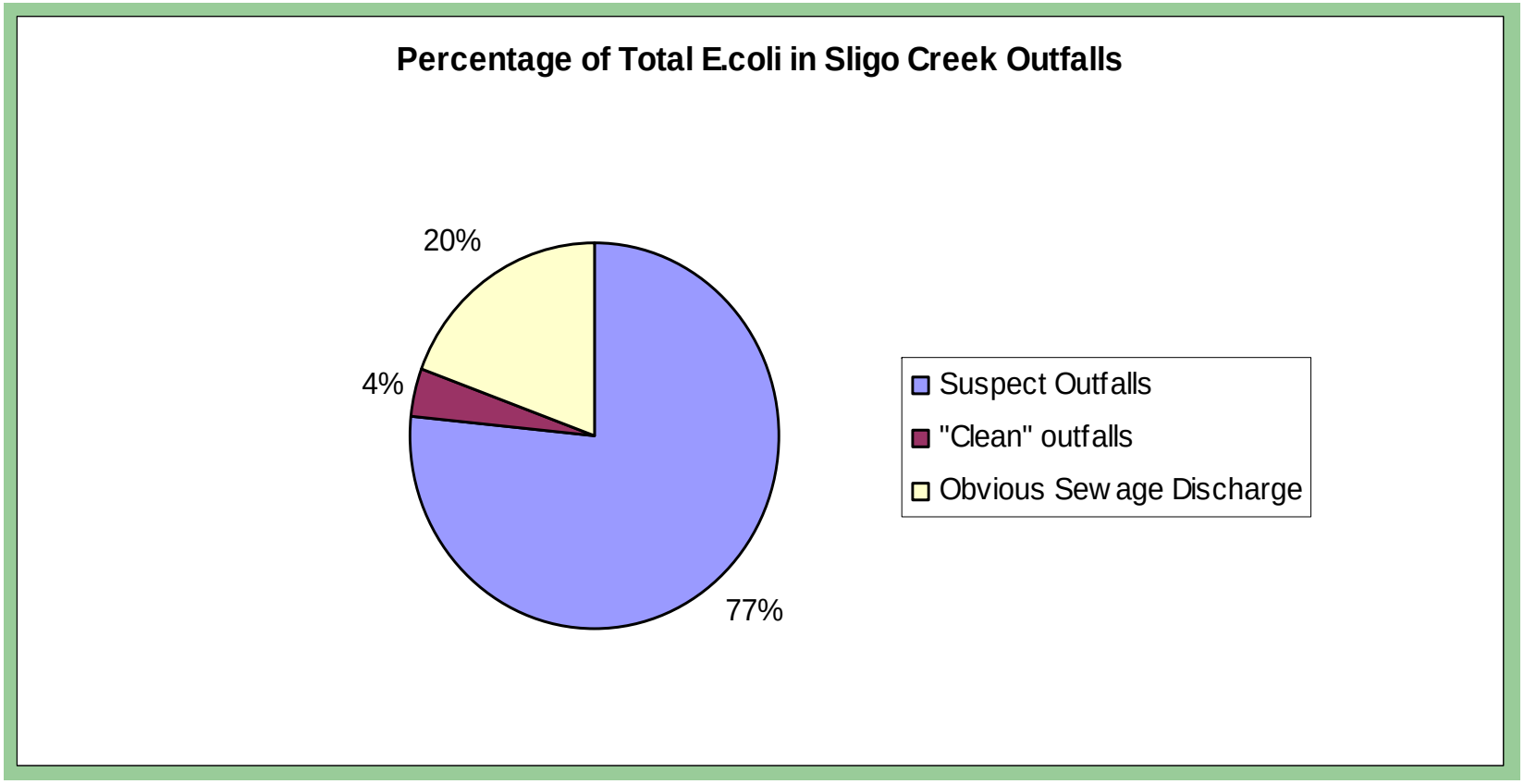
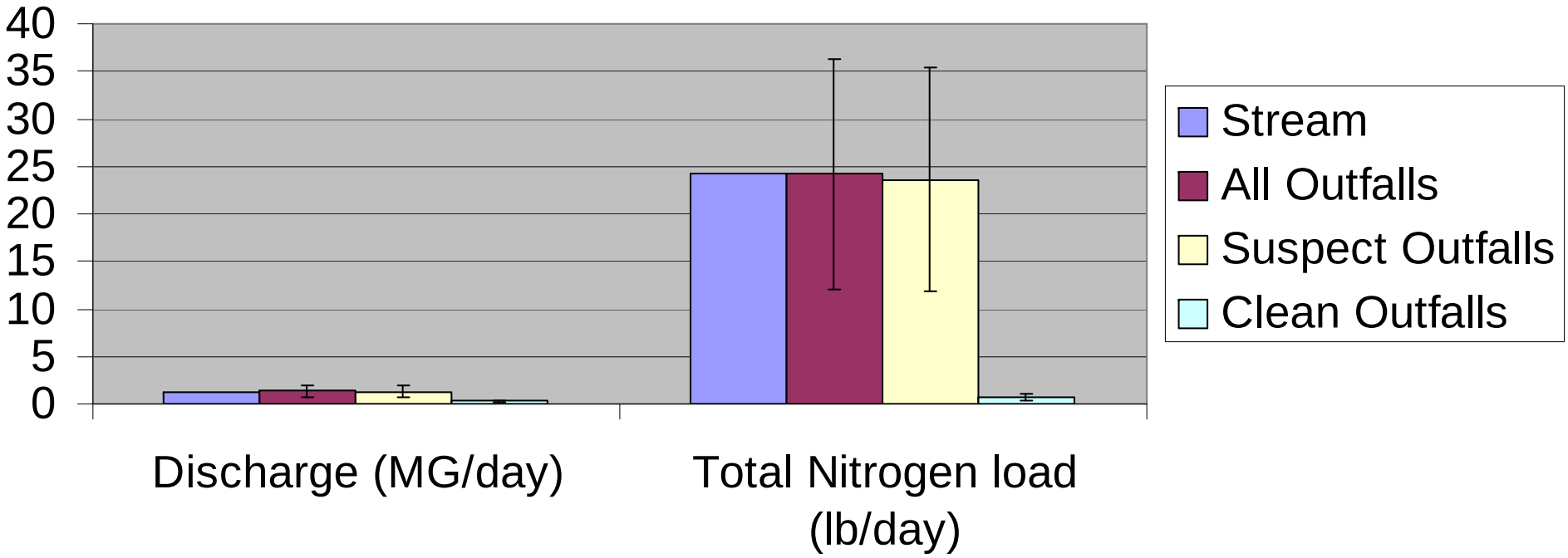
Recent Watershed Studies




Percentage of Total E.coli in Sligo Creek Outfalls
20%
4%
77%
Suspect Outfalls
"Clean" outfalls
Obvious Sewage Discharge


WR250
WR010
WR254
WR009

Sligo Creek
Nitrogen Load Summary



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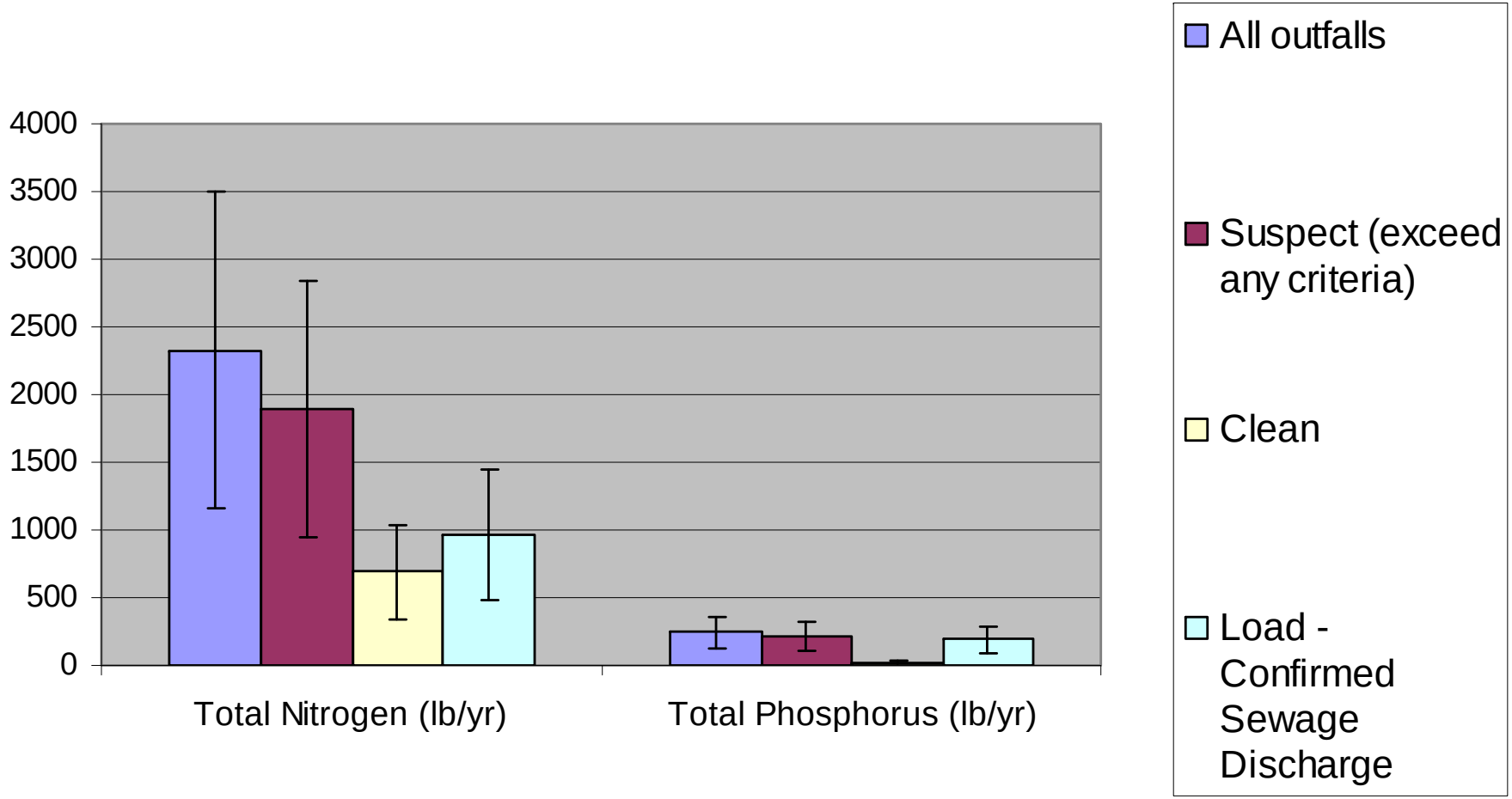
Western Run - Dry Weather Load



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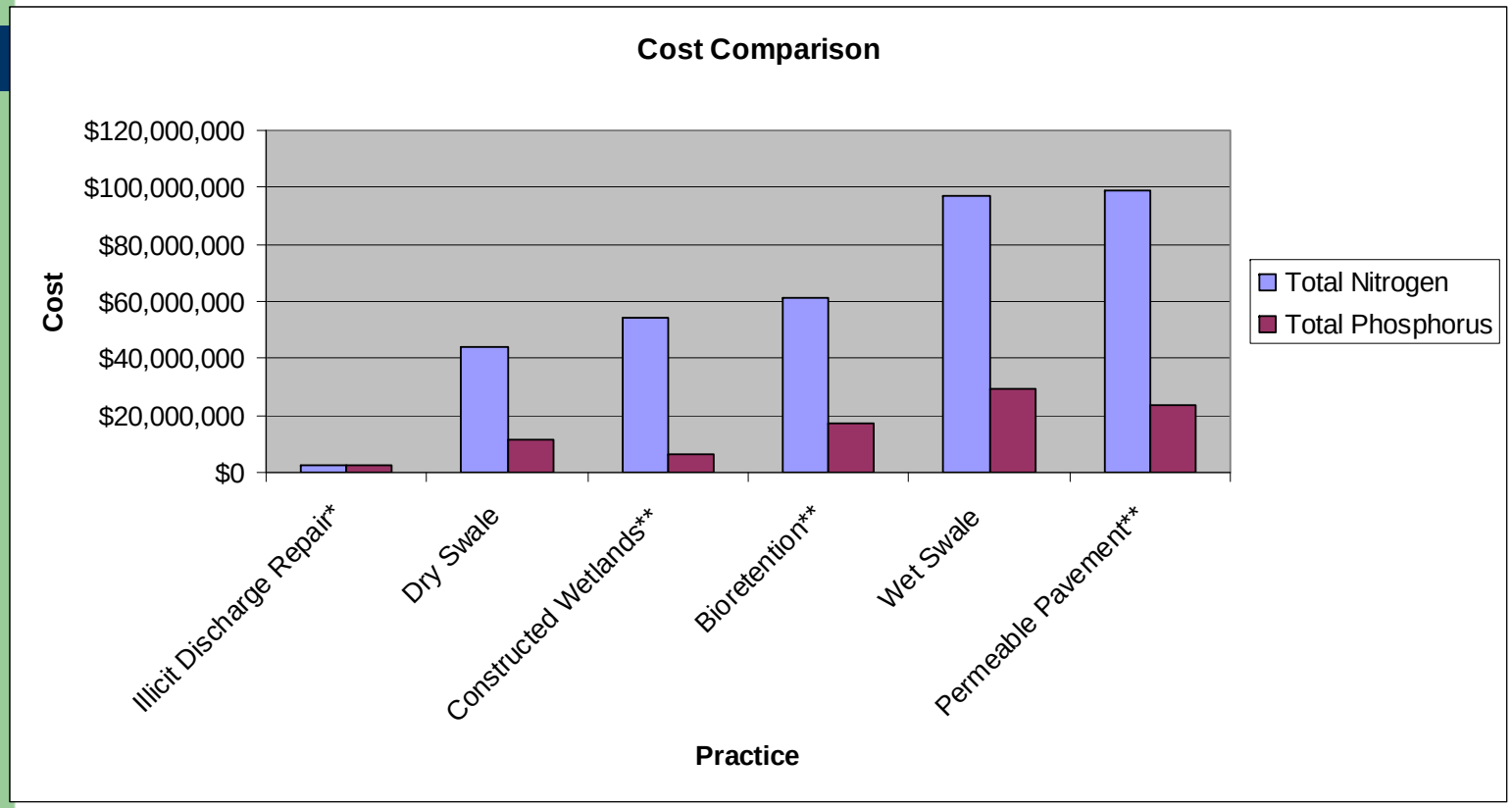
Cost-Effective Way to Control Pollutants



*Assumes 50K per repair for 47 repairs

**Assumes 100% of the water quality volume provided by treating 1" of rainfall

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Questions?

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