DOD Protocol & Guidance for Conducting Integrated Facility Watershed Impact Assessments

Developed by the USAEC for DOD

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NDIA Conference – April 9, 2003

1

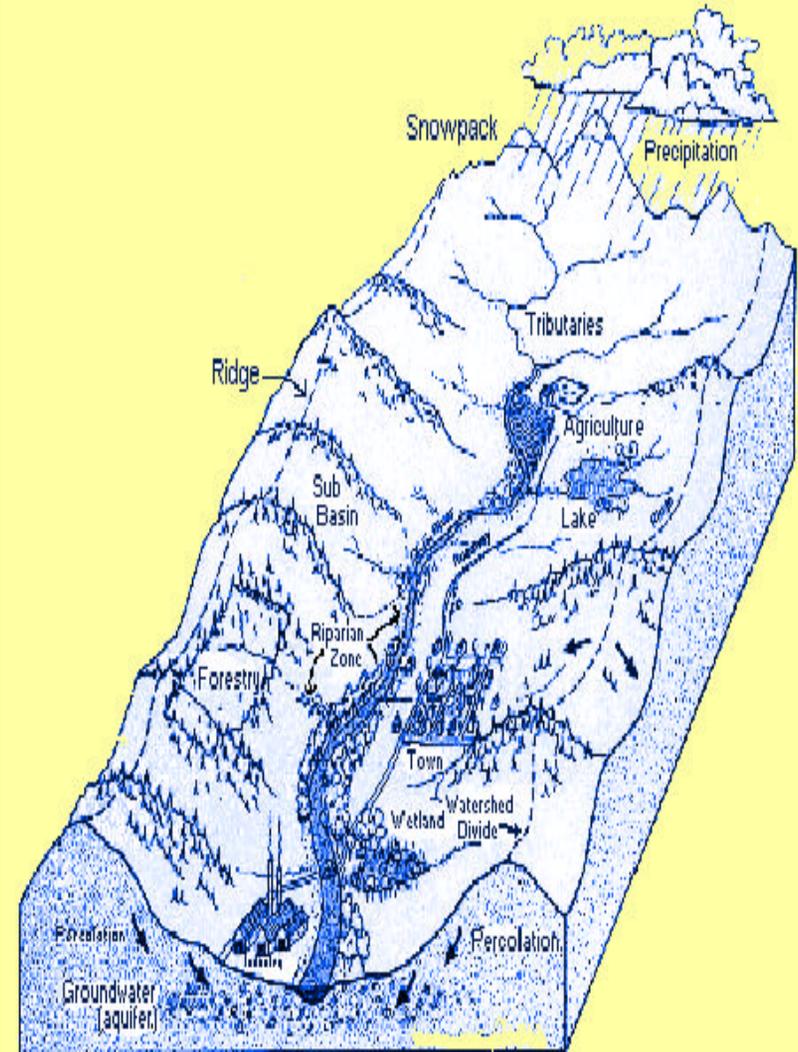# Agenda

- **Protocol Development**
  - →*Background*
  - →*Approach*
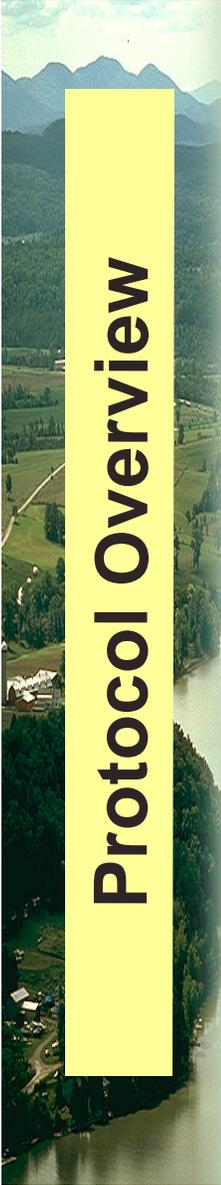 - →*Objectives*
  - →*Implementation*
  - →*Benefits for DoD*
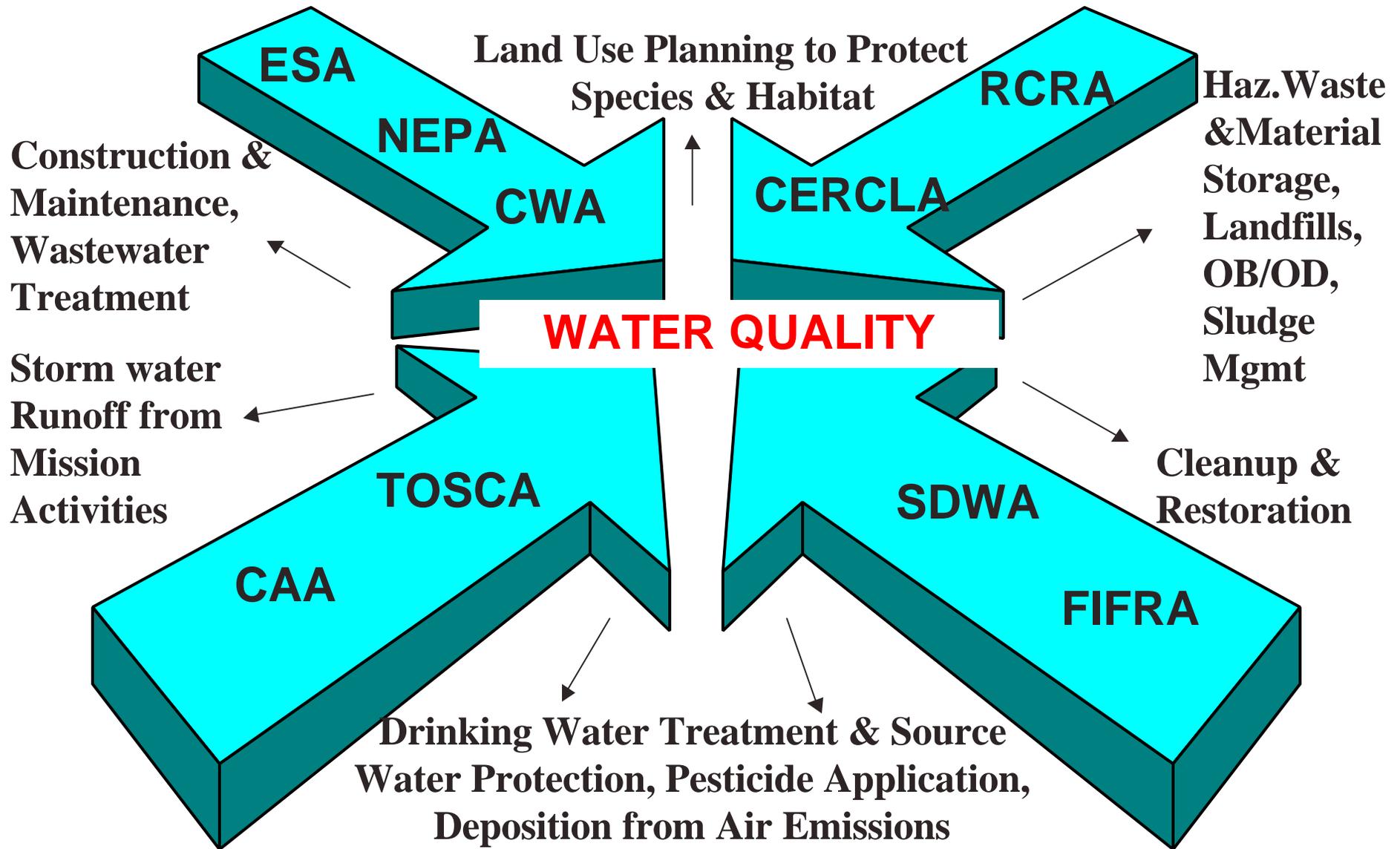- **Overview of Final Protocol**

Background

Why Develop a DOD Watershed Assessment Protocol?

- **Integrated Federal Strategies & Agreements & New Compliance Requirements**

- **Crosswalks Between Regulations**

- **Automation Of Data Collection & Reporting**

- **Watershed Approach Used To Address Regulatory Requirements**

- **No Standard DoD Approach Exists**

Approach - Step 1: Determine the Need

ESA

NEPA

CWA

Land Use Planning to Protect Species & Habitat

RCRA

CERCLA

Haz.Waste &Material Storage, Landfills, OB/OD, Sludge Mgmt

Construction & Maintenance, Wastewater Treatment

Storm water Runoff from Mission Activities

WATER QUALITY

Cleanup & Restoration

TOSCA

CAA

SDWA

FIFRA

Drinking Water Treatment & Source Water Protection, Pesticide Application, Deposition from Air Emissions

Approach (cont.)

- **Step 2: Determine Best Practices to Incorporate into Protocol**
  - Review existing studies & Provide Recommendations on Methods to Use for DOD Protocol
- **Step 3: Test Protocol at Five Installations**
  - Army: Ft. Stewart, McAlester
  - Navy/Marines/Air Force: Mayport; Beaufort; Moody

5

Objectives

- **Provide Standard Methods Easily Modified to Site Conditions**

- **Provide Step-by-Step User Friendly Product That Is Web Interactive**

- **Use Key Performance Metrics to Determine Current Conditions & Track Results**

- **Identify and Assess Potential Impacts of an Installation's Land Use Conditions and Activities to Watershed**

6

Objectives (cont.)

- **Involve Stakeholders**
- **Provide Prioritized List of Installation Impacts & Solutions**
- **Enable Easy Access to Wealth of Existing Data**
- **Identify Innovative Yet Proven Solutions**
- **Identify Partnerships & Funding Sources**

Implementation

- **Implement at Installations That Are:**
  - *In Impaired Watersheds or Source Water Protection Zones*
  - *Have Recurring Non-compliance Under Any Regulation That Identifies Water Quality Issues or will have new requirement due to TMDL development*
  - *Identified by DOD As Mission Essential Installations*
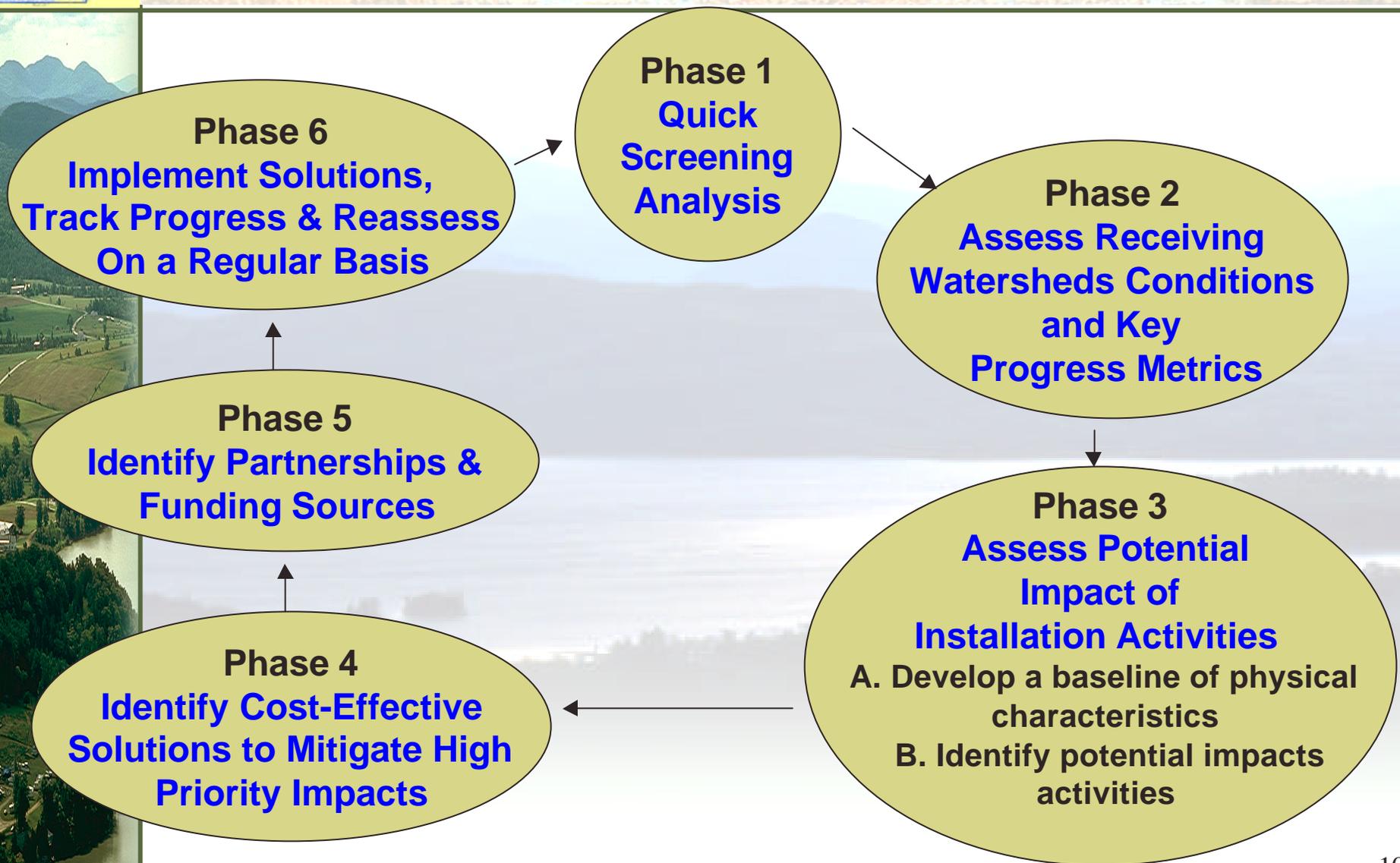- **Re-evaluate Based on TMDL 303d List Schedule**

Benefits to DOD Facilities

Protocol Overview

- **Holistic Approach to Environmental Management and Planning**
- **Use by All Pillars Could Reduce Redundancy**
- **Allows Quick Response to Addressing DOD Environmental Issues & Requirements**

- **Provides Justification for Future POMs**
- **Assist DOD in Prioritizing by Mission, Compliance Status, and Future Stationing / Re-Alignment**
- **Could Assist in the Reduction of Environmental Liabilities**

Overview: Final Protocol Phases
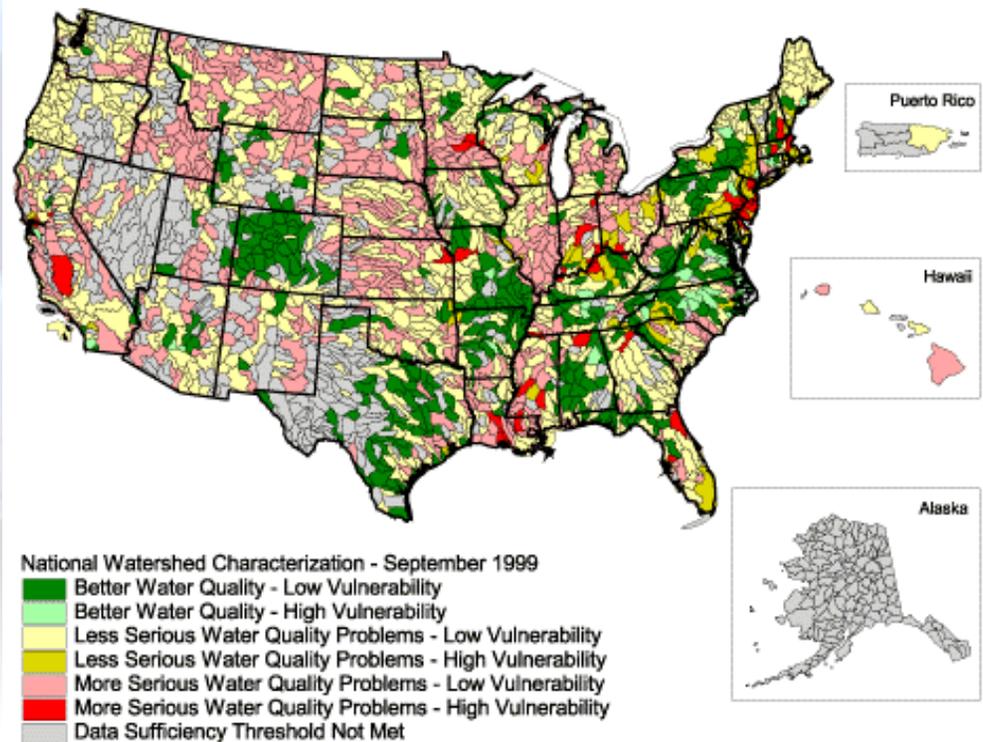
Phase 1
Quick Screening Analysis

Phase 2
Assess Receiving Watersheds Conditions and Key Progress Metrics

Phase 3
Assess Potential Impact of Installation Activities
A. Develop a baseline of physical characteristics
B. Identify potential impacts activities

Phase 4
Identify Cost-Effective Solutions to Mitigate High Priority Impacts

Phase 5
Identify Partnerships & Funding Sources

Phase 6
Implement Solutions, Track Progress & Reassess On a Regular Basis

10

Phase I
Quick Screening Analysis

See Handout

Protocol Phases

Using EPA's **Indicator Watershed Score**
Identify Installation's Watershed Using EPA Surf Your Watershed

National Watershed Characterization - September 1999
- Better Water Quality - Low Vulnerability
- Better Water Quality - High Vulnerability
- Less Serious Water Quality Problems - Low Vulnerability
- Less Serious Water Quality Problems - High Vulnerability
- More Serious Water Quality Problems - Low Vulnerability
- More Serious Water Quality Problems - High Vulnerability
- Data Sufficiency Threshold Not Met

Puerto Rico

Hawaii

Alaska

http:// www.epa.gov/wateratlas/geo/maplist.html.

Phase III. Develop a Total Activity Burden Score (TABS)
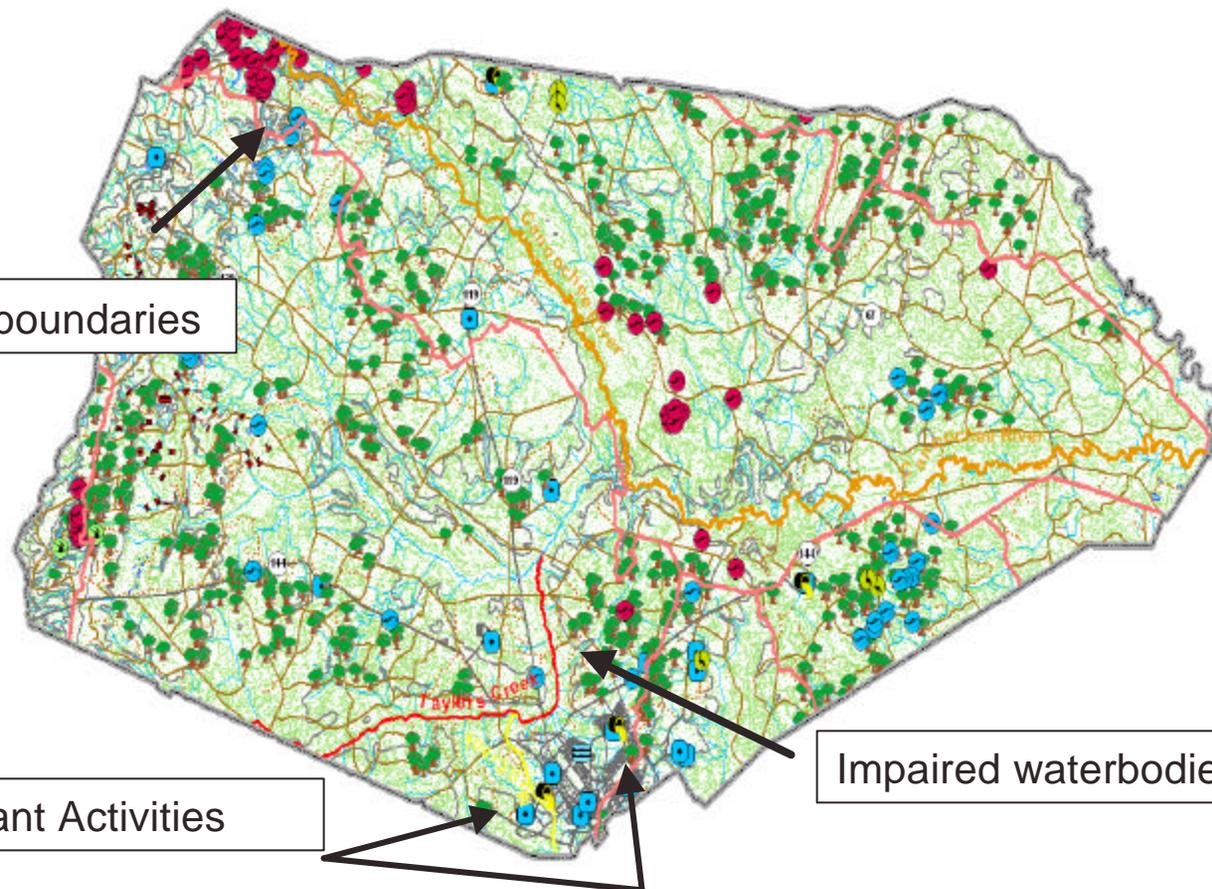
- **Identify Installation Physical Characteristics**

- **Develop "Activity Impact Score" (AIS)**

- **Add WPS and AIS= TABS**

- **Develop Baseline and Prioritize Activities**

- **Integrate with GIS**

13

Sample GIS Output

Validation of Site Activities in Relationship to 303(d) Listed Impaired Waterbodies

Watershed boundaries

Significant Activities

Impaired waterbodies

14

Phase IV. Develop Solutions

Goal:

Reduce Activity Impacts (TABS) to the greatest amount for the least amount of cost

Approach:

Select Innovative Solutions That Are Low Cost, Low Maintenance & Effective in Reducing Pollutants in Water Bodies
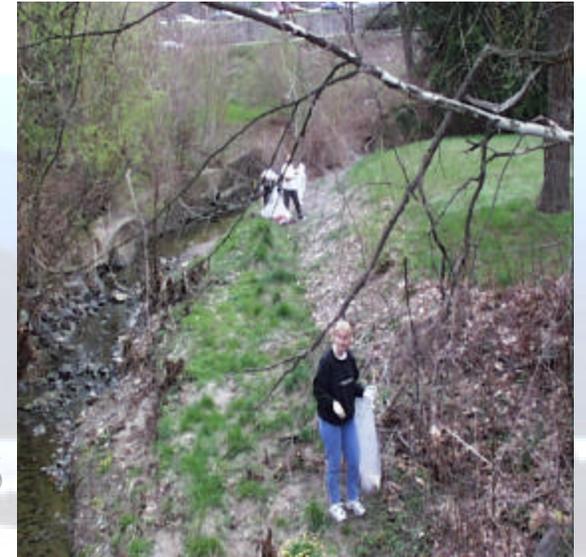
Phase V. Identify Partners

Guidance for Potential Partners

- **Regulators**
- **Citizens Groups**
- **Private Landowners**

Reasons for Partnerships

- **Technical Expertise**
- **Provide Media Relations**
- **Support Educational Programs**

Phase VI. Implement Solutions, Track Progress & Reassess

- Identify Funding Sources
- Template for Project Sheets
- Method for Tracking Progress

→ **Tracking key performance metrics**

→ **Reducing installation environmental burden score**

17

QUESTIONS?

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