

# TARGETING BMP's

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Heartland CSREES

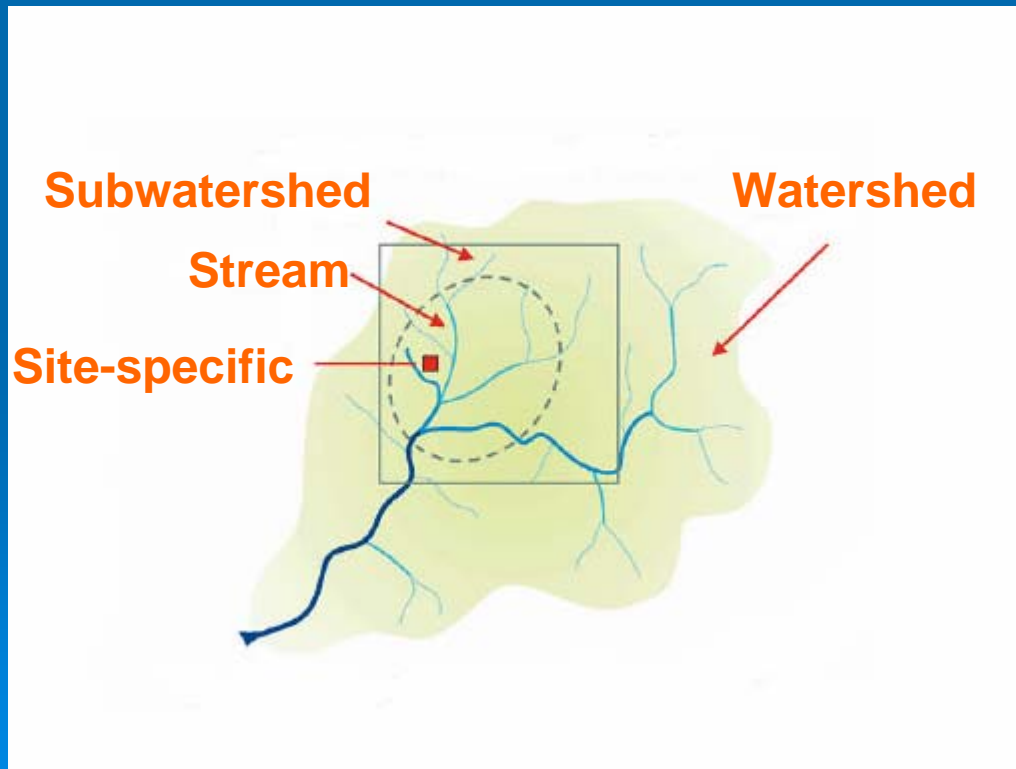
“Targeting Critical Source Areas for Implementation of BMPs”  
Workshop

# TARGETING

- Watershed Plans
  - Critical Areas
    - BMP's
      - Funding
- National Program Goals
  - Water Quality targets
  - Program Guidance

# Watershed-based Plan Development and Implementation

Also consider the geographic scale



# Watershed Planning Paradigm Shift

- The traditional paradigm for 319, EQIP, etc. has not enabled us to achieve our WQ goals
  
- Until you have quantitative knowledge of
  - (a) the nature and source of the WQ problem,
  - (b) the pollutant load reductions needed to meet WQS,
  - (c) the BMP's that will achieve that pollutant load reduction,you're not ready to implement BMP's that will solve the problem. (unless you are very lucky)

# EPA's Strategic Plan:

By 2012, use pollution prevention and restoration approaches to protect the quality of rivers, lakes and streams on a watershed basis.



# National Program Goals: Watershed Improvement Measure

- **“Strategic Target” (“SP-12”)**  
in EPA’s 2006 – 2011 Strategic Plan
- By 2012, improve water quality conditions in 250 impaired watersheds at the HUC-12 scale using the *watershed approach*.
  - *“Improved”* means one or more of the impairment causes identified in 2002 are removed for at least 40% of the impaired water bodies or impaired miles/acres.

# WHAT IS EPA DOING TO PROMOTE TARGETING?

- Establishing Program Guidance
- Establish Priority Watersheds
- Developing Improved Watershed Tools

# EPA's 319 Funding Guidelines

- “Incremental Funds” - \$100 million/year
- Must be used to develop and implement ***WATERSHED – BASED PLANS*** designed to achieve water quality standards

\*\* Where TMDL's have been developed, the plans incorporate them and go from there

# “Watershed-Based Plans”

- Our Section 319 Program and Grants Guidelines Identify **9 Components** that must be included in each “Watershed-Based Plan” to restore impaired waters
- Before a State implements a 319 restoration project, it must develop a watershed-based plan

# Nine Elements Contained in Watershed Management Plans Designed to Meet Water Quality Goals:

1. Identification of impaired waters and causes/sources of impairment.
2. Description of the NPS management measures (BMPs), and identification of the critical areas where they need to be implemented in the watershed.
3. Estimation of load reductions expected from BMPs (for AFOs, row crops, eroded streambanks, etc.) that need to be implemented in the watershed. (Estimates of needed load reductions should take into account established TMDL allocations.)
4. Estimation of the costs and technical assistance needed, and identification of the funding sources and authorities that may be relied upon to implement the plan.
5. Description of the information & education needed to enhance public understanding of the project, and encourage their participation in selecting, and implementing the management measures that will be implemented.
6. Schedule for implementing the BMPs identified in the plan.
7. Description of interim, measurable milestones for determining whether management measures are being successfully implemented.
8. Identification of a set of criteria or indicators that can be used to determine if load reductions are being achieved and substantial progress is being made toward attaining water quality standards.
9. Description of a water quality monitoring component for the watershed to evaluate the effectiveness of the implementation

# PRIORITY WATERSHED GOALS

- Focused approach
  - Emphasis on impaired waters
- Comprehensive water program planning
  - Non-point source
  - Point source
  - Monitoring
- Improved coordination, internally & externally
- Leverage dollars
- Data collection & tracking to meet National program measures

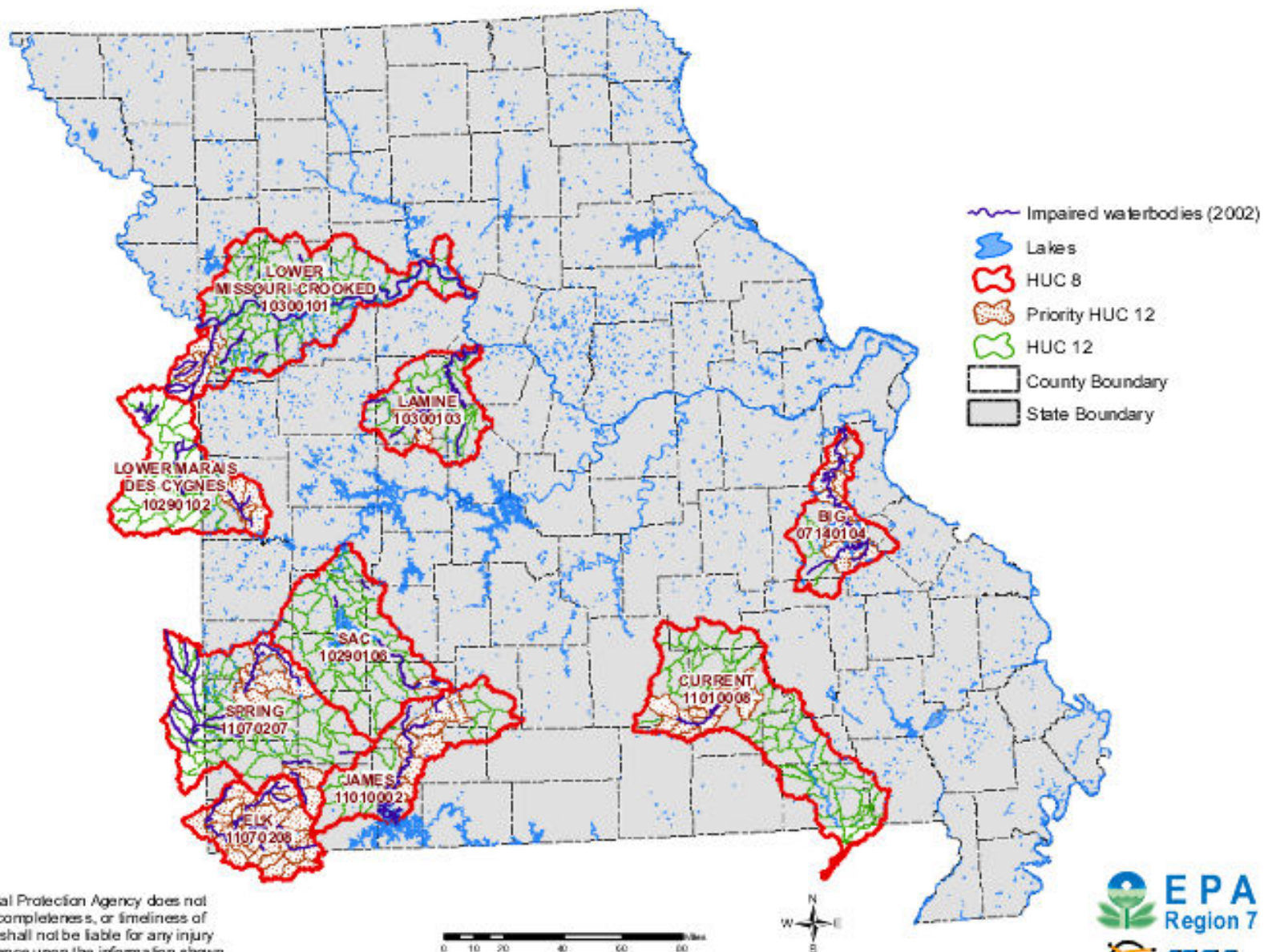
# Identification of Priority Watersheds for Improvement in Missouri:

- **Considerations in Missouri for identifying candidate / “priority” watersheds for improvement using the watershed approach included:**
  - **Watersheds’ water bodies are on the 2002 303(d) list**
  - **TMDLs are approved & a watershed plan is in place or is being developed**
  - **There are active local groups involved in watershed planning and implementation**
  - **There are already watershed-based water quality projects ongoing in the watershed, such as:**
    - **319 Projects**
    - **AgNPS SALT**
    - **Source Water Protection**

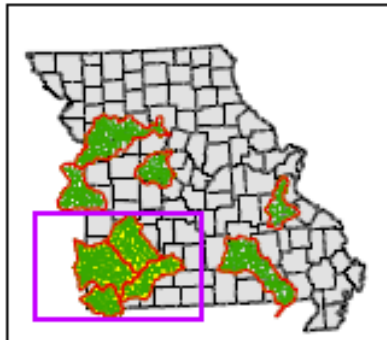
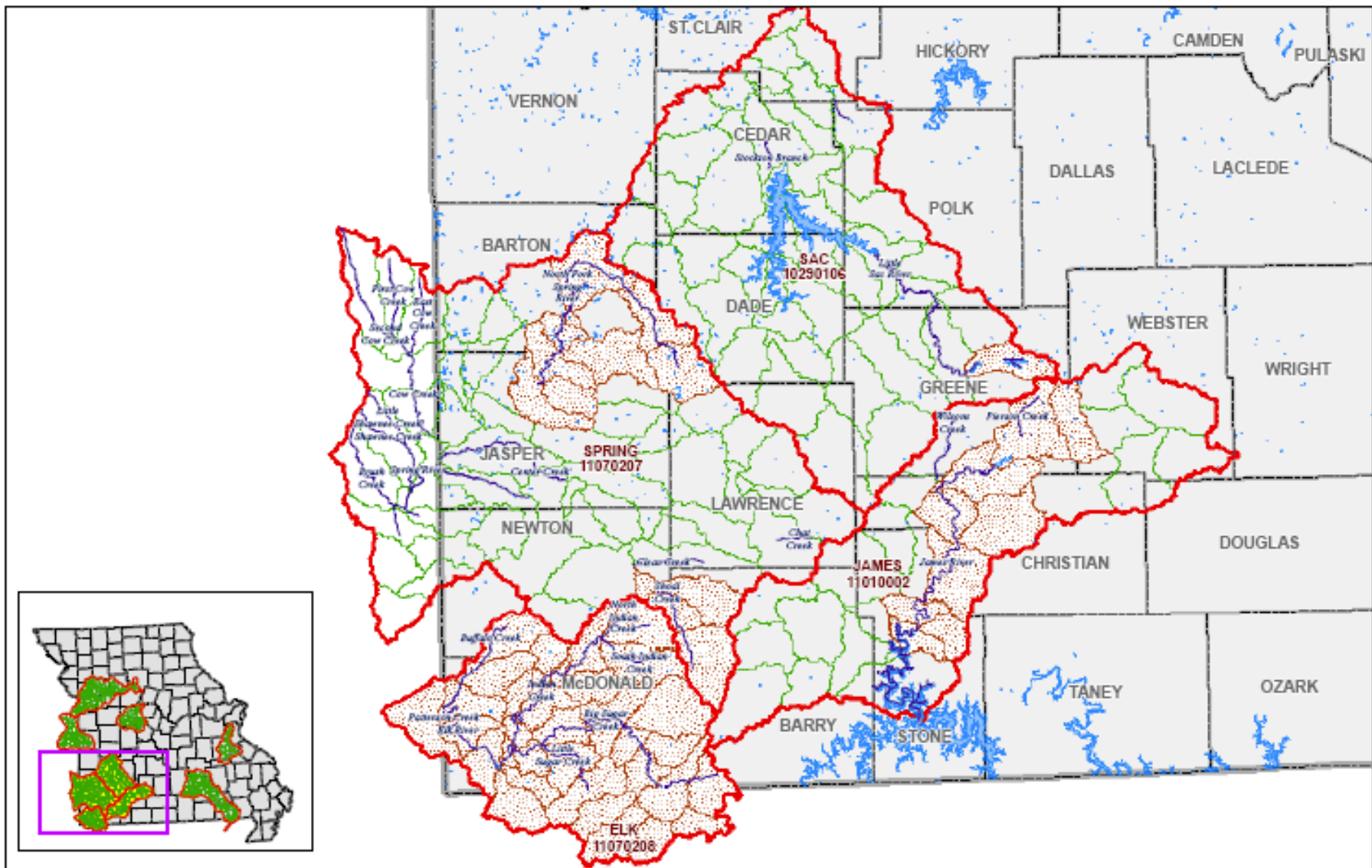
# Priority Watersheds for Watershed Improvement

HUC 8	HUC 12's	HUC8 Basin Name and Impaired Waterbodies	Impairment / TMDL Status
11070207	0601, 0602, 0603, 0604, 0203, 0203, 0202, 0201, 0205, 0207, 0208, 0209, 0212, 0213	<u>Spring River Basin:</u>  Upper Shoal Creek  Lamar Lake  N. Fork Spring River	Fecal Coliform / approved  Nutrients / approved  Sediment / approved
11010008	0312, 0401, 0214	<u>Current River Basin:</u>  Jack's Fork	Fecal Coliform / approved
10300103	0104, 0105, 0106	Lamine River Basin:  Spring Fork Lake	Nutrients / approved
10300101	0202, 0204, 0205, 0206, 0207	<u>Lower Missouri-Crooked:</u>  Blue River	Chlordane / approved

# HUC12 Priority Watersheds for Watershed Improvement



NOTE: The Environmental Protection Agency does not guarantee the accuracy, completeness, or timeliness of the data in this map, and shall not be liable for any injury or loss resulting from reliance upon the information shown.  
WOW 07 023 04/23/2007 pk/CJM



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 WQ# 07-023 04/23/2007 pk/CJM

## HUC12 Priority Watersheds for Watershed Improvement



- Impaired waterbodies (2002)
- Lakes
- HUC 8
- Priority HUC 12
- HUC 12
- County Boundary
- State Boundary



# Visit Our Web-Site!!!!!!!

*\* Many New Tools Available*

➤ [www.epa.gov/owow](http://www.epa.gov/owow):

- Includes watersheds, wetlands, TMDL's, NPS

➤ [www.epa.gov/nps](http://www.epa.gov/nps)

- All of “our” NPS stuff: Management Measures Handbooks, Watershed planning, Urban/LID, great outreach tools

**New!** [Nonpoint Source Outreach Digital Toolbox](#)

[New Section 319 Nonpoint Source Success Stories](#)

[National Management Measures to Control Nonpoint Source Pollution from Hydromodification](#)

[Draft Handbook for Developing Watershed Plans to Restore and Protect Our Waters](#)



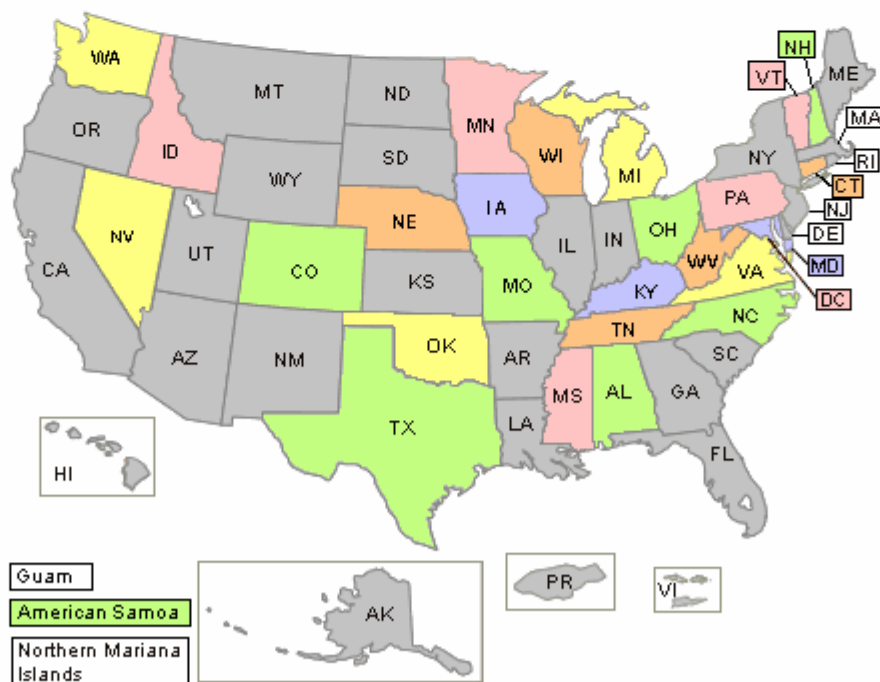
[Y2006 Tribal Workshops](#)

[2006 National Nonpoint Source Coordinators' Meeting Presentations](#) [EXIT Disclaimer](#)

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This **Section 319 Nonpoint Source Success Stories** Web site features waterbodies identified by states as being primarily nonpoint source-impaired and having achieved documented water quality improvements. Projects described here have received funding from [section 319](#), and in many cases, other funding sources dedicated to solving nonpoint source impairments. Water quality improvements are demonstrated through the achievement of water quality standards for one or more pollutants/uses (i.e. removal from the state's section 303(d) list of impaired waters); measured in-stream reduction in a pollutant; or measured improvement in a parameter that indicates stream health (e.g., increases in fish or macroinvertebrate counts). These stories also describe innovative strategies used to reduce nonpoint source pollution, the growth of partnerships and a diversity of funding sources.

Choose from the map or [list below](#):





# Handbook for Developing Watershed Plans to Restore and Protect Our Waters

DRAFT



1-800-490-9198

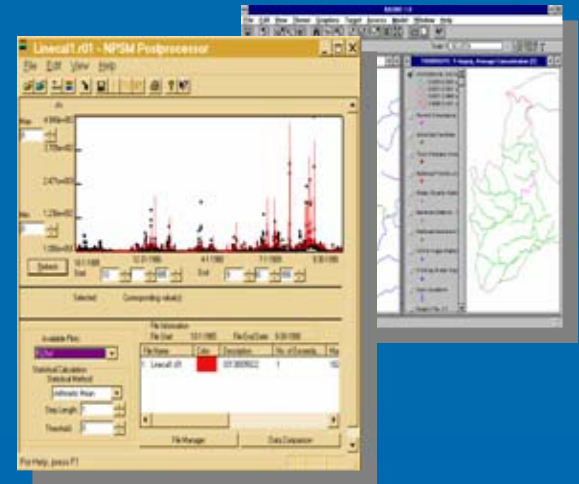
Or

[nscep@bps-lmit.com](mailto:nscep@bps-lmit.com)

EPA document # EPA 841-B-05-005

# Technical Analysis Challenges in Planning addressed by our Handbook

- GIS and geographic data
- Statistical interpretation of data
- Modeling and Spreadsheet tools
- Defining the pollution reductions from BMPs for Nonpoint Sources
- Setting up a monitoring program
- Evaluating changes due to management



# Demonstration of the Watershed Plan Builder

- An interactive, web-based tool to promote the development of comprehensive watershed protection and restoration plans.
- Designed to help local watershed organizations develop integrated watershed plans to meet state and EPA requirements and promote water quality improvements.
- Results in a customized outline of a comprehensive watershed plan for your watershed, populated with relevant links to EPA, other Federal agencies, and State water programs.

[www.epa.gov/owow/watershed](http://www.epa.gov/owow/watershed)



## Watershed Planning

[Contact Us](#) Search:  All EPA  This Area

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### Watershed Planning

#### Basic Information

#### Frequent Questions

#### Watershed Planning Process

#### Watershed Plan Builder

#### Examples

#### Information Sources

##### Publications and Resources

##### Analysis Tools and Technical Assistance

##### Funding Sources

##### Glossary of Terms

## Watershed Plan Builder

The Watershed Plan Builder is designed for users who are just beginning to develop a watershed plan, are in the process of developing a watershed plan, or updating an existing plan. It will help get you started on developing a watershed plan by guiding you through a series of questions designed to collect information about your watershed. The information you provide will be used to produce a [customized watershed plan outline](#). The outline will include recommended content to be included in the various sections of your watershed plan, as well as related data links and contact information. You can then use this outline to begin working through the [watershed planning process](#) with your stakeholders to create a [comprehensive watershed plan](#).

Before you begin, it may be helpful to gather information about your watershed. You will be asked to provide:

- Location information for the watershed (state, county, HUC, zip code)
- Reasons for why you are developing a watershed plan
- Information about other plans that may have been conducted for your watershed that may help you develop your watershed plan (source water protection plans, TMDL's, wetland management plans, community master plans, etc.)
- Information about activities, issues, and pollutants of concern in your watershed
- Names and contact information for stakeholders

### Tips for using this tool:

- Use the buttons at the bottom of each screen to move through the steps of the Plan Builder tool.
- Find additional information by using the search field in the right-hand navigation box.
- Click the "[Save](#)" button if you wish to save your data and return to the Plan Builder at a later time.
- Click on the "My Watershed Process" button to see the relationship between the pages in the Plan Builder tool and the customized watershed plan outline.

[Enter the Plan Builder](#)

#### Help

- 
- 
- 
- Glossary
- 
- 
- Frequent Questions

# NPS Digital Toolbox

- The Nonpoint Source (NPS) Outreach Toolbox is intended for use by state and local agencies and other organizations interested in educating the public on nonpoint source pollution or stormwater runoff. The Toolbox contains a variety of resources to help develop an effective and targeted outreach campaign.

[www.epa.gov/owow/nps/toolbox/](http://www.epa.gov/owow/nps/toolbox/)



# Nonpoint Source Outreach Toolbox

Contact Us Search:  All EPA  This Area  Go

You are here: [EPA Home](#) » [Water](#) » [Wetlands, Oceans, & Watersheds](#) » [Polluted Runoff \(Nonpoint Source Pollution\)](#) » Nonpoint Source Outreach Toolbox

- Nonpoint Source Toolbox Home
- Getting in Step Outreach Series
- Featured Products
- Catalog Search
- Where You Live
- A-Z Subject Index
- Logos, Slogans & Mascots
- Surveys & Evaluations
- Other NPS Outreach Collections
- Media Campaigns
- Frequent Questions

The **Nonpoint Source (NPS) Outreach Toolbox** is intended for use by state and local agencies and other organizations interested in educating the public on nonpoint source pollution or stormwater runoff. The Toolbox contains a variety of resources to help develop an effective and targeted outreach campaign. To start, use the sidebar menu to the left, the [descriptive links](#) below, or jump to the [navigable toolbox graphic](#) and select any drawer or book.


## Features of the NPS Outreach Toolbox:

- [EPA's Getting in Step Outreach Series](#) - A great place to get started and learn how to develop effective outreach. The series includes EPA's flagship publication, *Getting in Step: A Guide for Conducting Watershed Outreach Campaigns*, which presents the outreach development process as a logical, easy-to-apply sequence of steps. Information is also provided on related resources, including a free video companion guide and training workshop opportunities;
- [Featured Products](#) - Exemplary outreach examples culled from the catalog for increasing awareness and changing behaviors across each of the six targeted topics (general stormwater and storm drain awareness, lawn and garden care, pet care, septic system care, motor vehicle care, and household chemicals and waste) and organized by media type;
- [Searchable Catalog](#) - Contains more than 700 viewable and/or audible [TV](#), [radio](#), and [print ads](#) and [other outreach products](#) to increase awareness and/or change behaviors across six common topics (see "Featured Products"). Search by media type or topic. Permissions for using the cataloged products are disclosed (and in most cases, granted) by the product owners, and contact information, campaign Web sites, and other pertinent details are provided;
- ["Where You Live" Catalog Search Option](#) - Allows products to be searched by state;
- [Logos, Slogans, & Mascots](#) - Ready-made identifiers to brand outreach campaigns and make them memorable;
- [Surveys & Evaluations](#) - Surveys of public attitudes and perceptions regarding NPS problems and solutions, and evaluations of the effectiveness of some local NPS media campaigns;
- [Other NPS Outreach Collections](#) - Links to collections of NPS outreach and educational products compiled by states and other organizations;
- [Frequent Questions](#) - For using the many features of this Toolbox.

Get the NPS Outreach Toolbox on CD



# Watershed Management Decision Support System Integrated Tools

- Eventually will provide decision support to help users select the most appropriate tool for each step of the watershed planning process
  - Data bases – weather, soils, land use, land cover, Existing BMPs, W.Q. (Storet, etc), resource condition, point source info, etc
    - Connect to: GIS – Mapping and Analysis Tools
      - Connect to: Modeling and Data analysis Tools
        - Connect to BMP Efficiency Data and Cost Data
          - Connect to tools to help support WQ Monitoring and Implementation Tracking
          - Plans of appropriate scale, level of detail, and suited to site-specific and local needs.
- 

# SUCCESS STORIES



# **A Total Maximum Daily Load Implementation Plan for Beaver Creek and Little Creek**



**Prepared for:**  
**Virginia Department of Conservation and Recreation**  
**Submitted March 1, 2007**

**Submitted by:**  
**MapTech, Inc., 3154 State Street, Blacksburg VA 24060**  
**New River-Highlands RC & D, 100 USDA Drive, Suite F, Wytheville VA 24382**



**Table 6.7 Targeting subwatershed order for streamside fencing on Beaver Creek.**

<u>Beaver Creek Subwatershed Priority</u>	<u>Livestock Exclusion Streamside Fencing</u>
1st	B6
2nd	B14
3rd	B11
4th	B7
5th	B13
6th	B9
7th	B16
8th	B15
9th	B12
10th	B3
11th	B10
12th	B5
13th	B2
14th	B4
15th	B1
16th	B8
17th	B17
18th	B18

**Table 6.8 Targeting subwatershed order for streamside fencing on Little Creek.**

<u>Little Creek Subwatershed Priority</u>	<u>Livestock Exclusion Streamside Fencing</u>
1st	L8
2nd	L3
3rd	L6
4th	L5
5th	L4
6th	L2
7th	L1
8th	L7

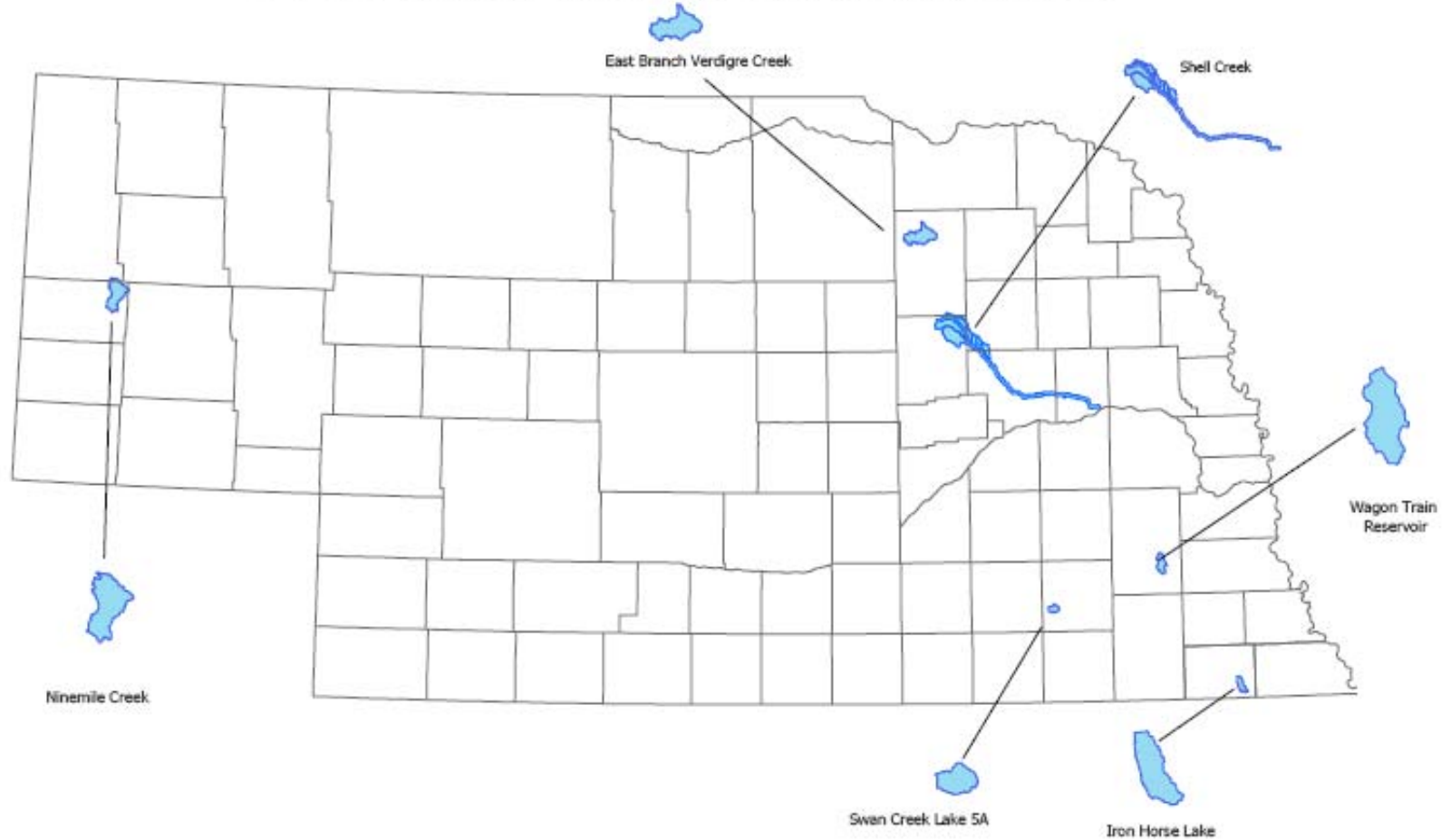
**Table 6.9 Targeting subwatershed order for human fecal bacteria sources in Beaver Creek.**

<b>Beaver Creek Subwatershed Priority</b>	<b>Failing Septic Systems and Straight Pipes Combined Load</b>
1st	B15
2nd	B16
3rd	B11
4th	B9
5th	B12&B17
6th	B13
7th	B14&B18
8th	B6
9th	B7
10th	B3
11th	B10
12th	B5
13th	B2
14th	B4
15th	B1
16th	B8

**Table 6.10 Targeting subwatershed order for human fecal bacteria sources in Little Creek.**

<b>Little Creek Subwatershed Priority</b>	<b>Failing Septic Systems and Straight Pipes Combined Load</b>
1st	L5
2nd	L6
3rd	L3
4th	L8
5th	L4
6th	L2
7th	L1
8th	L7

# Environmental Quality Incentive Program (EQIP) FY 07 Water Quality Initiative Areas



# FUTURE OF TARGETING BMP'S



# 2007 FARM BILL

## ➤ ADMINISTRATIONS PROPOSAL

- Conservation proposal authorizing an additional 7.825 billion over 10 years above the current conservation baseline.
- Significant reforms which include; better targeting of financial resources.
- Regional Water Enhancement Program
  - Conservation coordination solutions

# 2007 FARM BILL

- Sen. Charles Grassley (R-IA): "The administration also brought forward a reasonable approach to conservation by focusing on the land that needs the greatest environmental benefits. Farmers should be allowed to put the most sensitive land into conservation and be allowed to farm the good land."

# CEAP HIGHLIGHTS

- **COMPETITIVE WATERSHED GRANTS – SELECTED BY CSREES**
  - **WHAT IS THE OPTIMAL SET OR SUITE OF CONSERVATION PRACTICES AND WHAT IS THEIR OPTIMAL PLACEMENT IN THE WATERSHED?**

# CONCLUSION

- Targeting is critical to meet our water quality goals.
- Watershed approach is evolving.
- New & better tools.

