Watershed Management Planning and TMDLs

What's the Difference?

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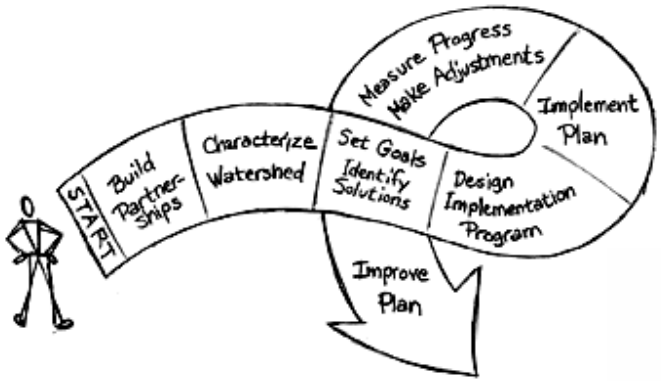
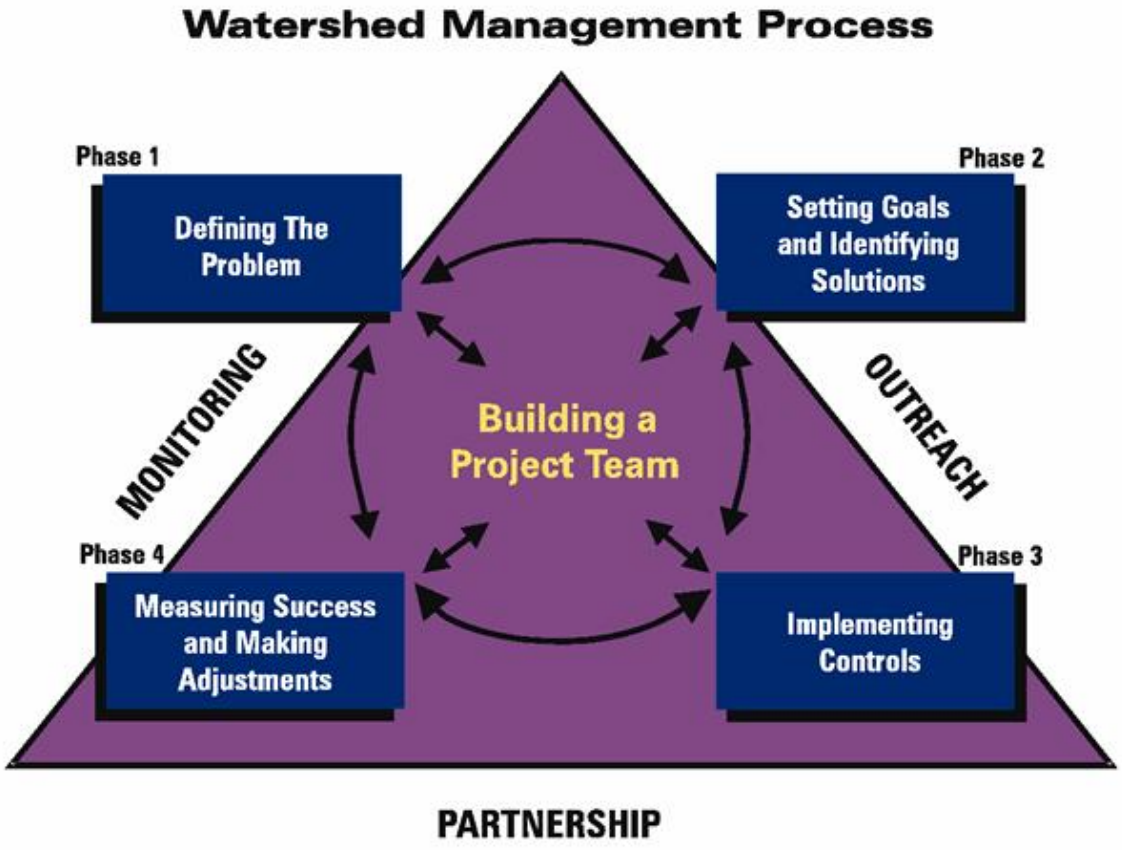
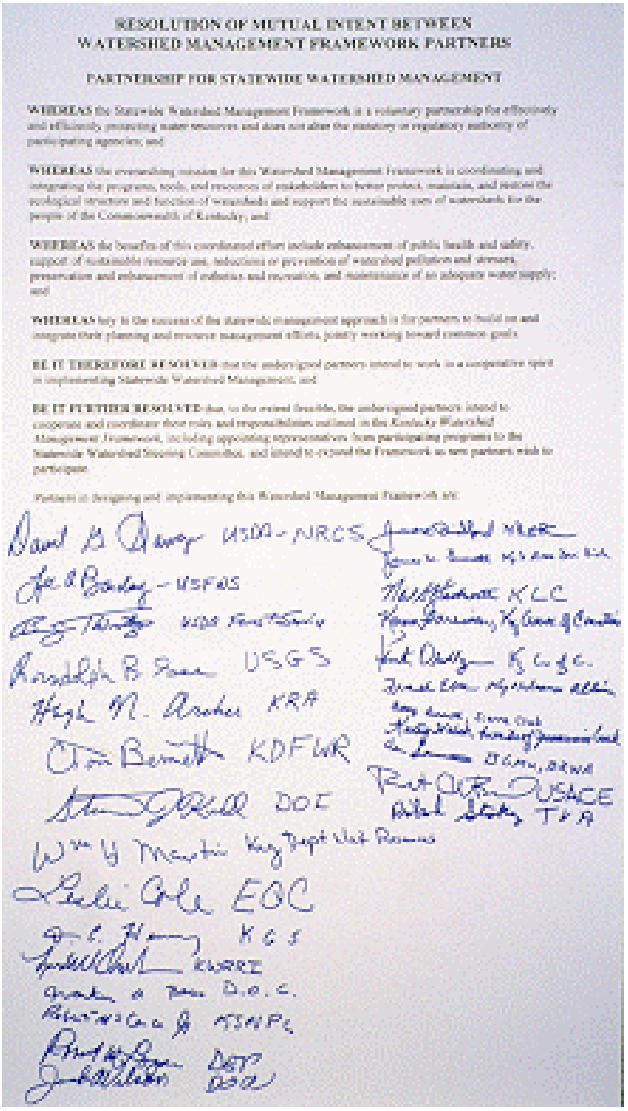
Watershed Management Planning





Context for planning & management

- We have problems
  - Polluted waters
  - Cultural disconnects
  - Limited authority
  - Few resources
- We have solutions
  - Interested people
  - Improving science & technology
  - Excellent relationships among public/private sectors



RESOLUTION OF MUTUAL INTENT BETWEEN
WATERSHED MANAGEMENT FRAMEWORK PARTNERS

PARTNERSHIP FOR STATEWIDE WATERSHED MANAGEMENT

WHEREAS the Statewide Watershed Management Framework is a voluntary partnership for effectively and efficiently protecting water resources and does not alter the statutory or regulatory authority of participating agencies; and

WHEREAS the overarching mission for this Watershed Management Framework is coordinating and integrating the programs, tools, and resources of stakeholders to better protect, maintain, and restore the ecological structure and function of watersheds and support the sustainable uses of watersheds for the people of the Commonwealth of Kentucky; and

WHEREAS the benefits of this coordinated effort include enhancement of public health and safety, support of sustainable resource use, reductions or prevention of watershed pollution and stressors, preservation and enhancement of fisheries and recreation, and maintenance of an adequate water supply; and

WHEREAS key to the success of the statewide management approach is for partners to build on and integrate their planning and resource management efforts, jointly working toward common goals

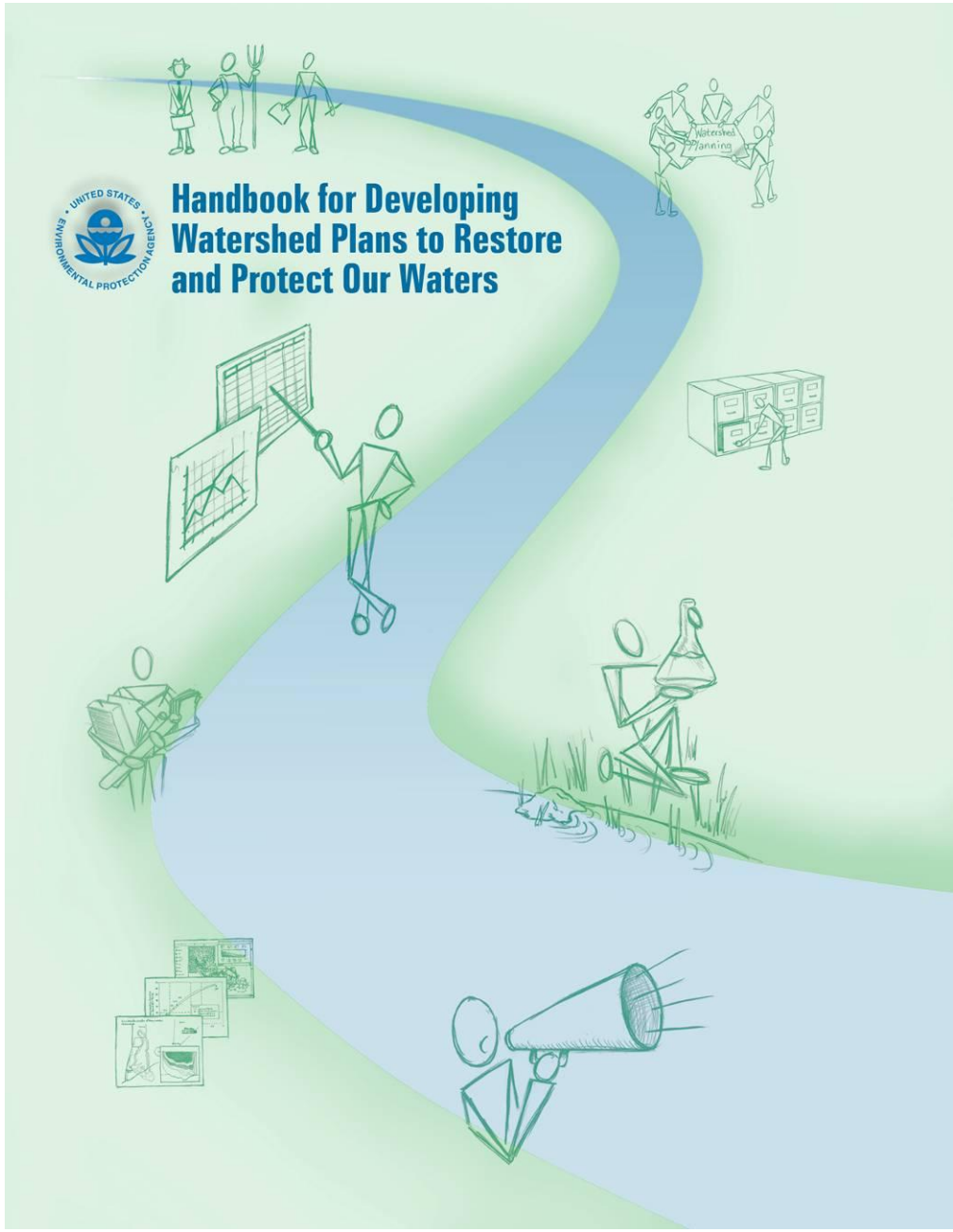
BE IT THEREFORE RESOLVED that the undersigned partners intend to work in a cooperative spirit in implementing Statewide Watershed Management; and

BE IT FURTHER RESOLVED that, to the extent feasible, the undersigned partners intend to cooperate and coordinate their roles and responsibilities outlined in the Kentucky Watershed Management Framework, including appointing representatives from participating programs to the Statewide Watershed Steering Committee, and intend to expand the Framework as new partners wish to participate.

Partners in designing and implementing this Watershed Management Framework are:

USDA - NRCS
USFWS
USGS
KRA
KDFWR
DOE
EQC
KGS
KWRRI
D.O.C.
KLC
USACE
TVA

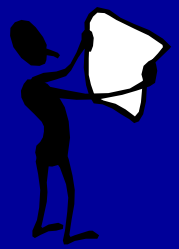
Watershed Planning Handbook



http://www.epa.gov/owow/nps/watershed_handbook/

The Process:

Watershed Planning Steps



STEP 1

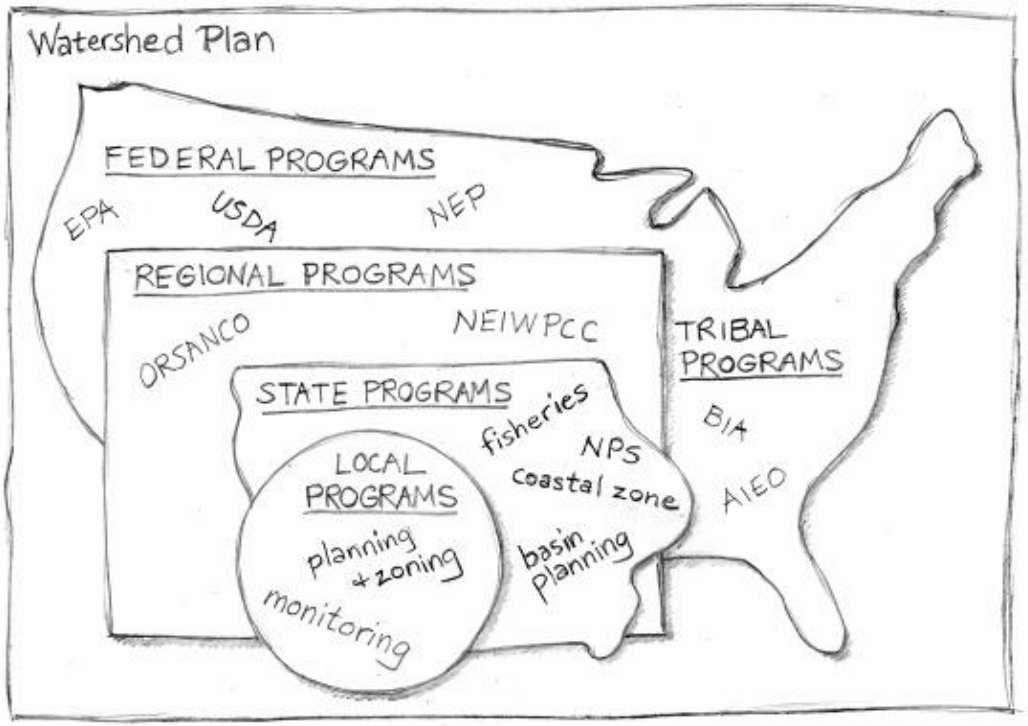
BUILD PARTNERSHIPS

- –ID stakeholders & issues of concern
- –ID scope of effort & planning area
- –Set preliminary goals

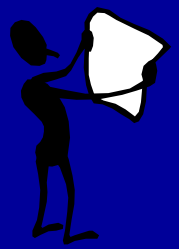
Waukegan Harbor, Illinois
August 7, 2009

Keys to Team Success

For best results, coordinate the watershed planning effort with other federal, state, and local activities



Watershed Planning Steps



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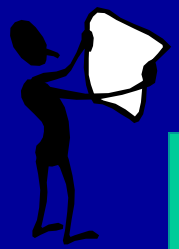
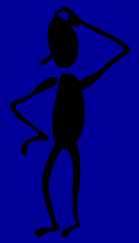
STEP 2
CHARACTERIZE WATERSHED
–Gather existing data
–ID data gaps
–Collect additional data, if needed
–ID causes and sources
–Estimate pollutant loads

Watershed Planning Steps





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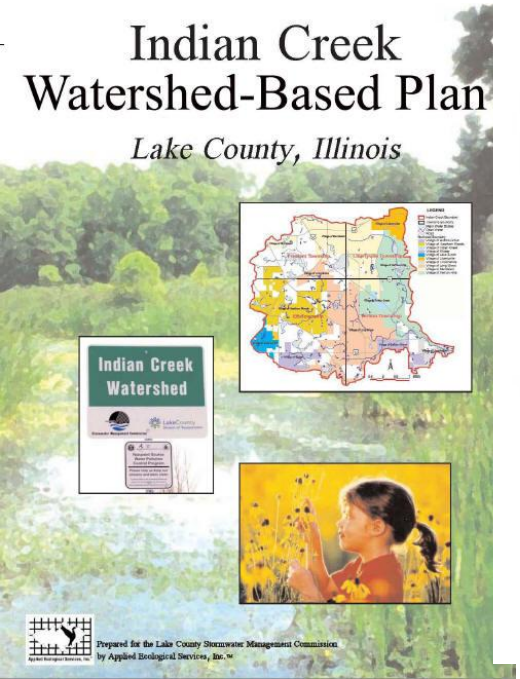
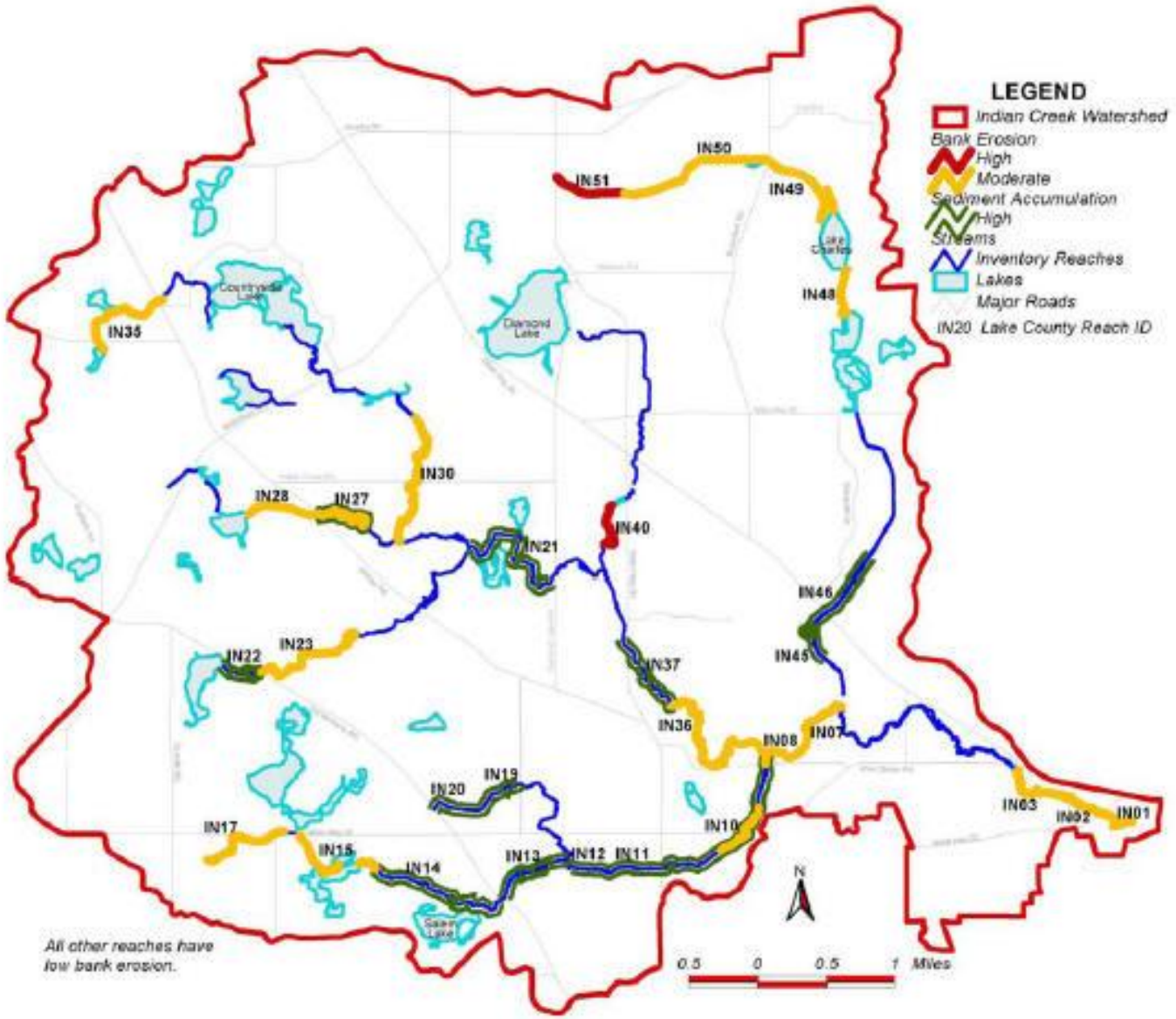
–ID causes
–Estimate p

STEP 3
FINALIZE GOALS AND IDENTIFY SOLUTIONS
–Set goals and management objectives
–Develop indicators/targets
–Determine load reductions needed
–ID critical areas
–ID management measures needed

Identifying Critical Areas

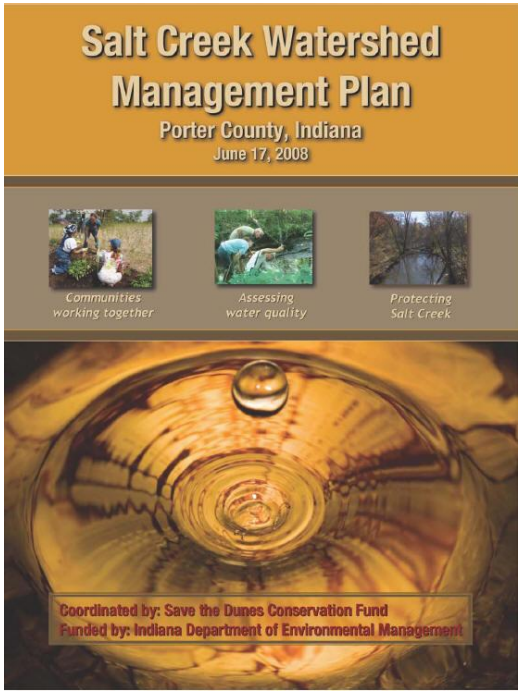
Indian Creek Watershed, Illinois

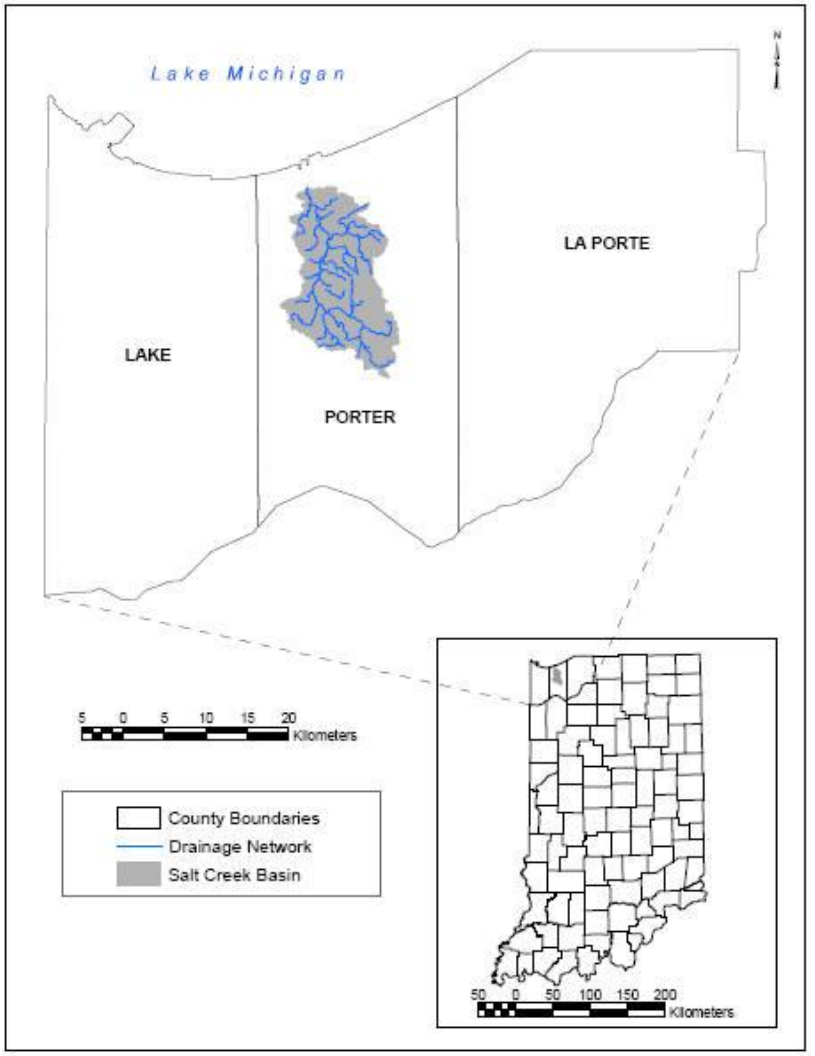




Identifying Critical Areas

Salt Creek Watershed, Indiana





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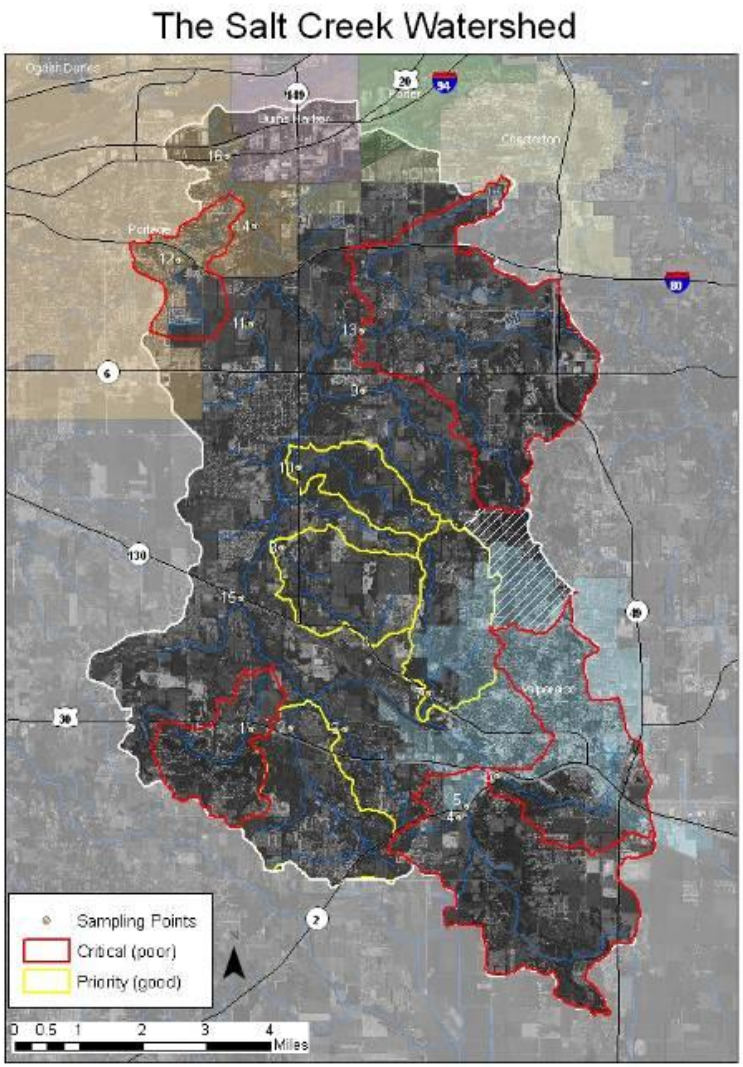


Critical Areas (Red)

- Need BPMs to improve poor water quality

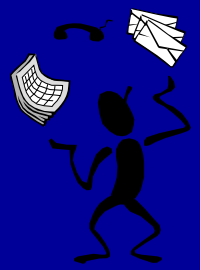
Priority Areas (Yellow)

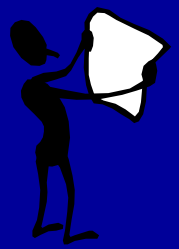
- Need to protect good water quality

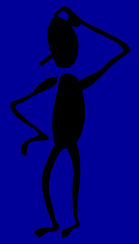
Based upon:

- water quality data
- confirmed sources
- projected future development
- and causes of impairment

Watershed Planning Steps







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–Set goals and
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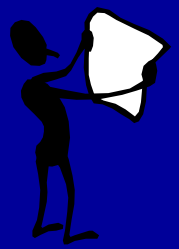
–ID critical area
–ID manageme

STEP 4
DESIGN IMPLEMENTATION PROGRAM
–Develop Implementation schedule
–Develop monitoring component
–Develop evaluation process
–ID technical and financial assistance needed
–Assign responsibility

Watershed Planning Steps



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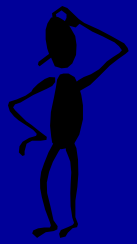

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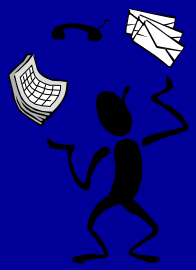

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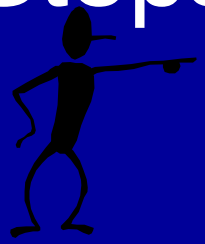
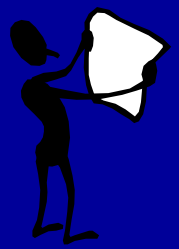


STEP 5
IMPLEMENT WATERSHED PLAN
- Implement management strategies
- Conduct monitoring
- Conduct outreach activities

Watershed Planning Steps



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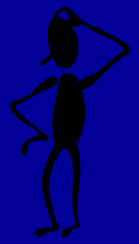

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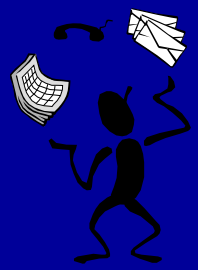

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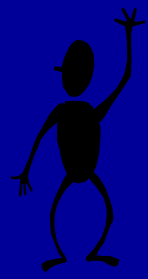

STEP 6
MEASURE PROGRESS AND MAKE ADJUSTMENTS
–Review and evaluate
–Share results
–Prepare annual plans
–Make adjustments

CWA § 319 Nonpoint Source Guidelines

- Watershed plans needed to restore impaired waters & protect other waters
- Plans should be designed to meet water quality standards
- Plans must include nine elements (“a-i”)

EPA's Nine Elements for Watershed Plans

a. **Identify causes & sources of pollution**

b. **Estimate load reductions expected**

c. **Describe mgmt measures & targeted critical areas**

d. **Estimate technical and financial assistance needed**

e. **Develop education component**

f. **Develop project schedule**

g. **Describe interim, measurable milestones**

h. **Identify indicators to measure progress**

i. **Develop a monitoring component**

Source: US EPA, 2004 319 Supplemental Guidelines

Thank You!

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