EPA Internet Resources for Watershed and Nonpoint Source Topics

Watershed Handbook - This handbook is intended to help communities, watershed organizations, and state, local, tribal and federal environmental agencies develop and implement watershed plans to meet water quality standards and protect water resources.
https://www.epa.gov/nps/watershed-planning

The Watershed Academy is a focal point in EPA's Office of Water for providing training and information on implementing watershed approaches.
https://www.epa.gov/watershedacademy

Monitoring and Evaluating Nonpoint Source Watershed Projects for those who develop and implement monitoring plans for watershed management projects.
https://www.epa.gov/nps/monitoring-and-evaluating-nonpoint-source-watershed-projects

Nonpoint source success stories: https://www.epa.gov/nps/Success

Additional references for watershed management and monitoring:

https://www.epa.gov/nps/watershed-approach-technical-resources including papers on:

- Adjusting for Depreciation of Land Treatment When Planning Watershed Projects
- Technical Memorandum #2 Relative Applicability of Particle Distribution Measures and Bank Slope Stability in Evaluating NPS Watershed Projects
- Minimum Detectable Change and Power Analysis
- Applying Benthic Macroinvertebrate Multimetric Indexes to Stream Condition Assessments
- Presenting Results (PDF)(26 pp, 3 MB, December 2016)

https://www.epa.gov/nps/nonpoint-source-monitoring-technical-notes including papers on:

- Monitoring Data Exploring Your Data, The First Step
- Designing Water Quality Monitoring Programs for Watershed Projects
- Surface Water Flow Measurement for Water Quality Monitoring Projects
- Lag Time in Water Quality Response to Land Treatment
- Using Biological and Habitat Monitoring Data to Plan Watershed Projects
- Statistical Analysis for Monotonic Trends
- Minimum Detectable Change Analysis
- Pollutant Load Estimation for Water Quality Monitoring Projects
- Monitoring for Microbial Pathogens and Indicators
- Baseline Assessment of Left-Censored Environmental Data Using R
- Land Use and BMP Tracking for NPS Watershed Projects
- Explanatory Variables: Improving the Ability to Detect Changes in Water Quality in Nonpoint Source Watershed Studies

Minimum Elements of a Watershed-based Plan[i]

Element a. Identification of causes of impairment and pollutant sources or groups of similar sources that need to be controlled to achieve needed load reductions, and any other goals identified in the watershed plan. Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation).

Element b. An estimate of the load reductions expected from management measures.

Element c. A description of the nonpoint source management measures that will need to be implemented to achieve load reductions in element b, and a description of the critical areas in which those measures will be needed to implement this plan.

Element d. Estimate of the amounts of technical and financial assistance needed, associated costs, and/or the sources and authorities that will be relied upon to implement this plan.
Element e. An information and education component used to enhance public understanding of the plan and encourage their early and continued participation in selecting, designing, and implementing the nonpoint source management measures that will be implemented.
Element f. Schedule for implementing the nonpoint source management measures identified in this plan that is reasonably expeditious.

Element g. A description of interim measurable milestones for determining whether nonpoint source management measures or other control actions are being implemented.

Element h. A set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made toward attaining water quality standards.

Element i. A monitoring component to evaluate the effectiveness of the implementation efforts over time, measured against the criteria established under element.

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[i] The nine elements are the components of the watershed planning process that EPA believes are the most critical to preparing effective watershed plans.