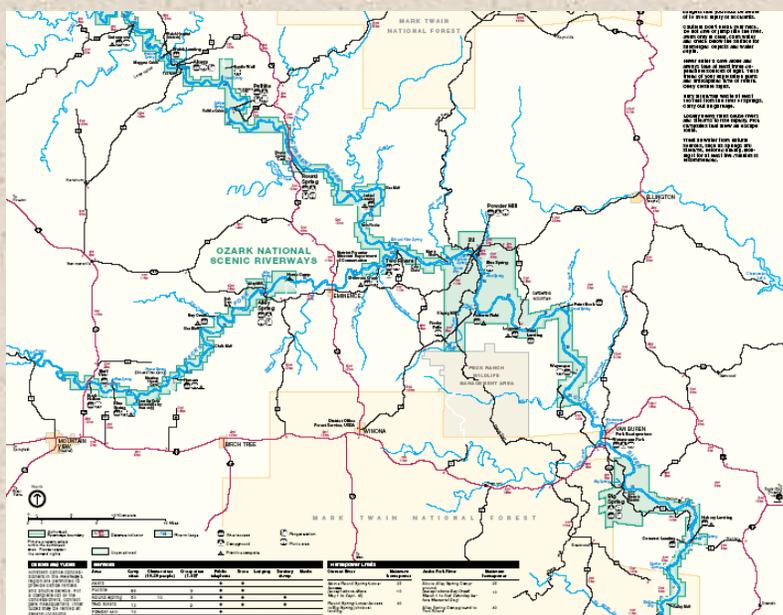




# Natural Resource Condition Assessment

## Effigy Mounds National Monument and Ozark National Scenic Riverways



**Phase 1 Planning Workshop**  
**September 6th and 7th 2006**  
**Richard A. Schoettger Conference Building**  
**USGS Columbia Environmental Research Center**  
**4200 New Haven Road, Columbia, MO 65201**

# Background of NPS NRAP



- Many national parks are facing increasing threats from human-induced disturbances
- Congress determined that NPS needs to better understand and evaluate the existing data that are available concerning the state of knowledge and condition of natural resources within each park
- FY 2003 Appropriations Act, instructed and funded NPS to assess NPS-managed watershed resources
  - Watershed/Natural Resource Assessment Program (NRAP)
  - Conduct assessments that will help meet Department of the Interior land health goal reporting as prescribed by the Government Performance and Results Act of 1993 (GPRA).
  - NRAP will allow the NPS to gain this needed understanding and to eventually address threats and issues on watershed or regional landscape scales.

# NRAP Objectives



- Seeks to compile and assess existing information documenting the state of knowledge and known condition of natural resources
- NRAP outputs form the basis for development of actions to reduce and prevent impairment of park resources through park and partnership efforts
- Pilot projects launched in most NPS regions



# EFMO/ONSR Pilots



- Ultimately MoRAP is charged with providing a multi-disciplinary (integrative) synthesis to inform NPS about scientific significance, functional status, and current and emerging issues/challenges
- Synthesis must incorporate a strong geospatial component (written report and GIS data)
- Potential Products
  - Maps of spatial extent/distribution of important natural resources
  - Descriptions of scientifically important attributes (conditions, processes, or functions)
  - Recommended strategies to maintain attributes over time
  - Evaluation of threats/stressors
  - Maps depicting current condition status
  - Recommended science-based targets (e.g., thresholds, natural range of variability)
  - Identification of critical data gaps and recommendations for filling gaps

# Ecosystem Assessment

- Ecosystems are complex, hierarchically-structured, multicomponent, interacting biophysical systems
  - Landscapes/Major habitats (Context)
  - Biota
  - Chemical and Physical Properties
  - Energy and Nutrient Processes
  - Hydrology and Geomorphology
  - Natural Disturbances
- No single metric or index can be used to adequately assess ecosystem health
- Ecosystem assessments must be multiscale and multiparameter

# Goal of Workshop

- Develop a framework for the natural resource condition assessments at EFMO and ONSR that will allow the NPS to gain the understanding necessary to address threats and issues on watershed or regional landscape scales

# Workshop Objectives

1. Establish explicit goals and objectives for the assessments at each park
2. Assess and rank the management issues faced by park managers at each park
3. Evaluate other assessments in terms of their geographic, analytical, and ecological frameworks
4. Develop a list of desired end products

# Workshop Objectives Continued

5. Identify ecological parameters that will be useful for evaluating resource condition status
  - a. Determine subset of most pertinent/useful parameters
  - b. Establish reference, baseline, desired future conditions
6. Identify threat/stressor measures useful for evaluating human disturbances
7. Assess data needs and identify data sources for quantifying resource condition for each ecological parameter and to quantify threats/stressors
8. Assess and identify major data gaps
9. Select geographic framework for assessments