



Protecting a Shared Resource Across Political Boundaries:

A Watershed Management Plan for the St. Joseph River Basin In Michigan and Indiana

To be prepared for:

Michigan Department of Environmental Quality
Surface Water Quality Division

To be prepared by:

Friends of the St. Joe River Association, Inc.

In cooperation with:

KIESER & ASSOCIATES
Kalamazoo, MI

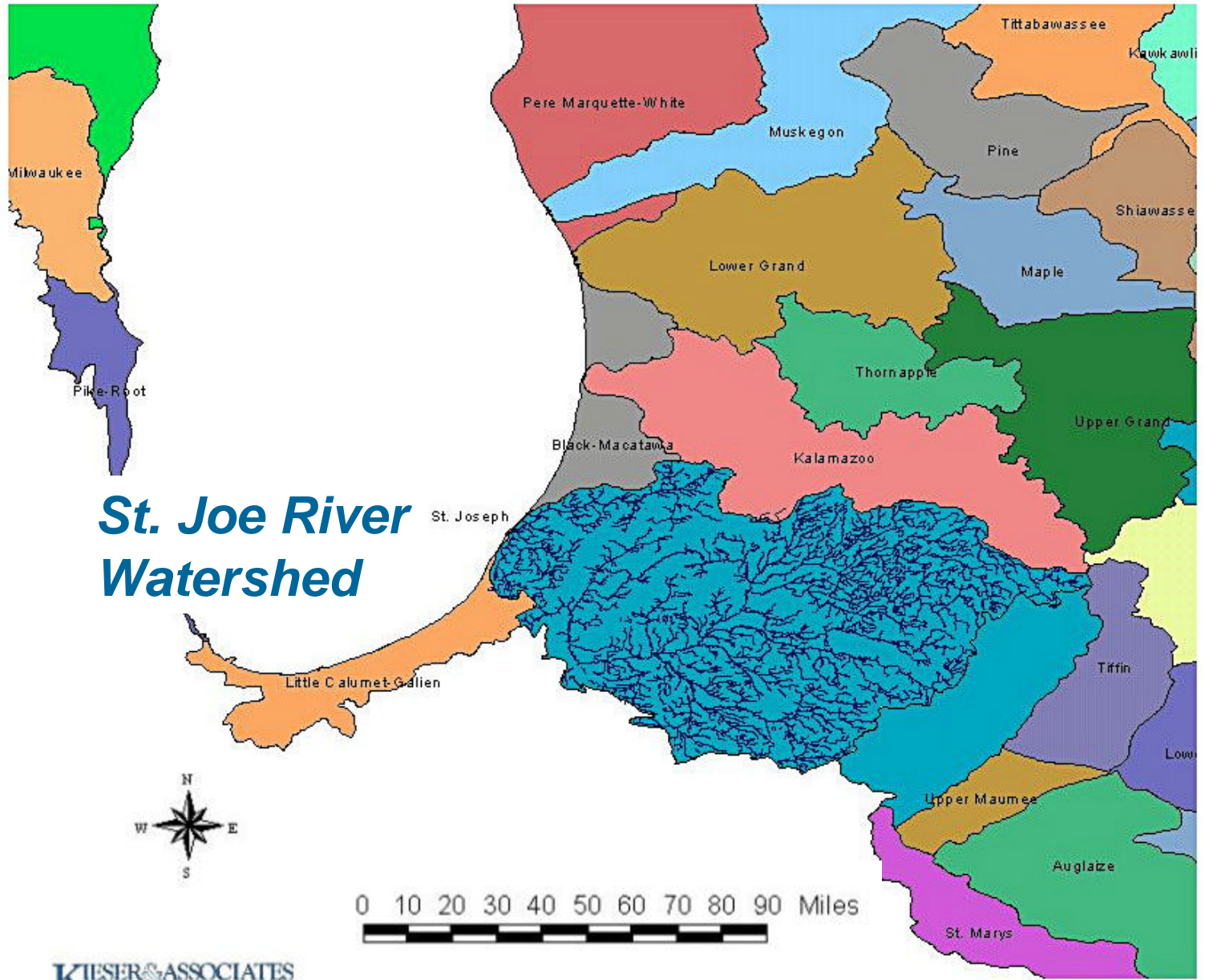
*December 3, 2002 Presentation to the
St. Joe River Basin Commission
Elkhart, IN*

Mission Statement...

To support the issues which concern the welfare of the St. Joseph River: the conservation of the water supply in the river and it's watersheds, the maintenance of the water quality of the river, evaluation of hydrological data of the river and its tributaries so that decisions and actions of the corporation may be conducive to the betterment of the river, and to operate exclusively for educational, historical, charitable and scientific purposes.



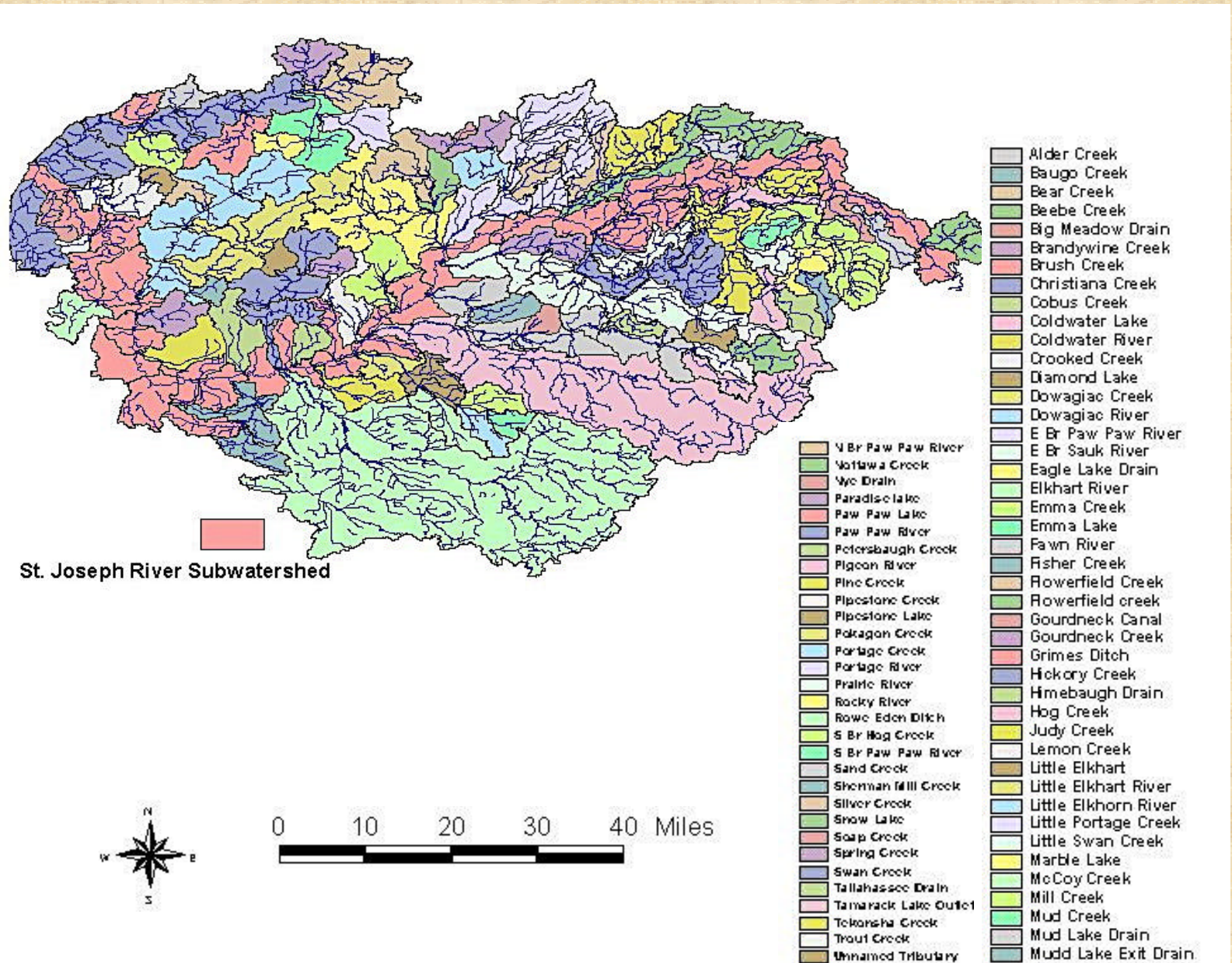
Watersheds of the Lower Lake Michigan Basin



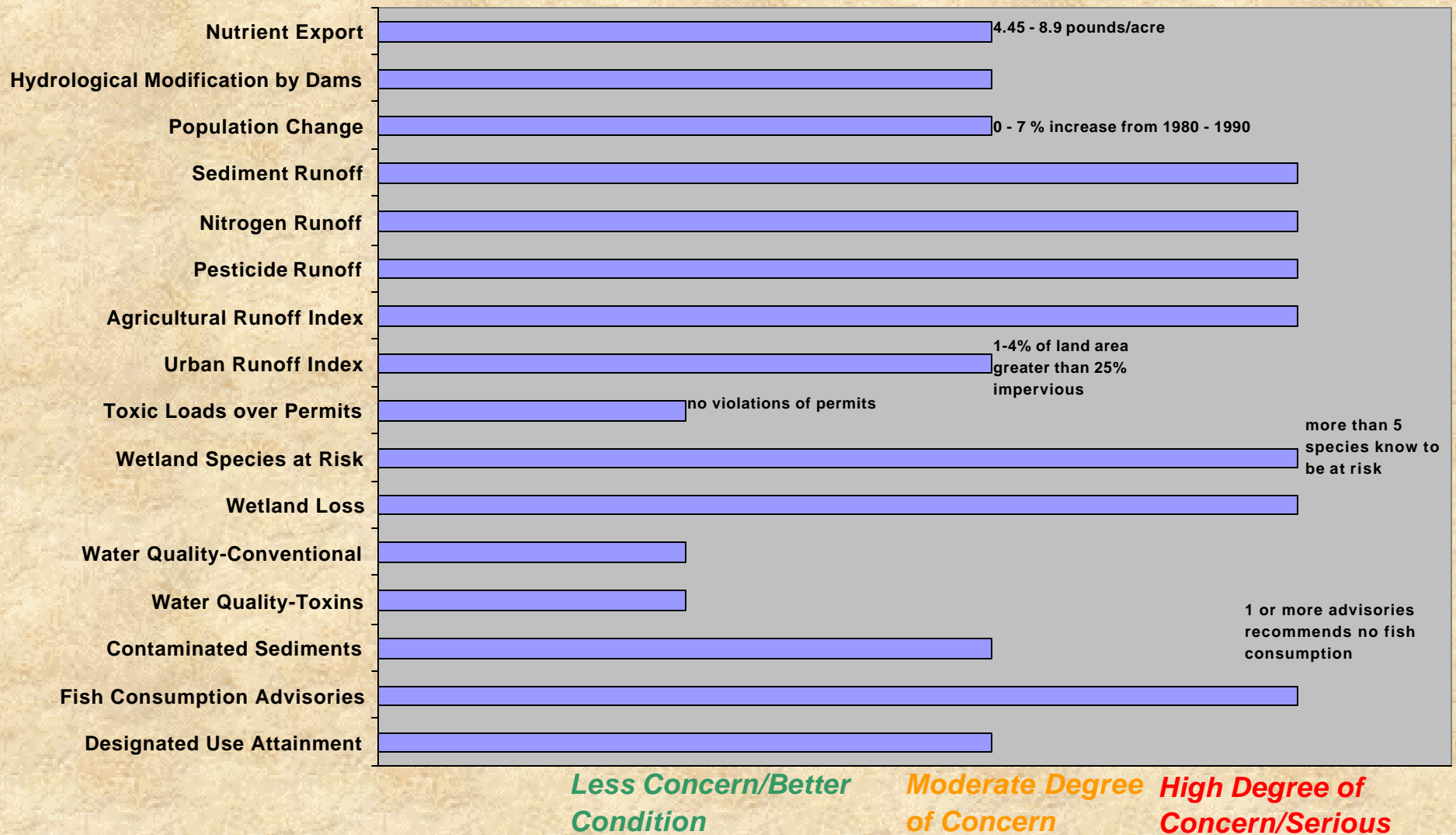
**St. Joe River
Watershed**



St. Joe River Sub-basins



Condition of Watershed Indicators (USEPA, IWI)



Anticipated Work Plan Outcomes

- ❖ Watershed-wide stakeholder participation
- ❖ Assessment of water pollution concerns
- ❖ Building upon ongoing efforts
- ❖ Compilation of monitoring data capable of providing information necessary for effective watershed planning
- ❖ Development of solutions on a watershed basis through a stakeholder driven process
- ❖ An approvable watershed management plan
- ❖ Capitalizing on objectives, needs and issues associated with current and future programs for participants
- ❖ Creation of a web-based approach to communicate all key project elements
- ❖ A flexible, working watershed plan framework accessible to all

[Angling Indiana: Fish Identification and Consumption Database](http://www.cfs.purdue.edu/anglingindiana/)

This site offers Indiana fish consumption advisories by county, as well as tips on fish preparation, species identification and nutritional content.

www.cfs.purdue.edu/anglingindiana/



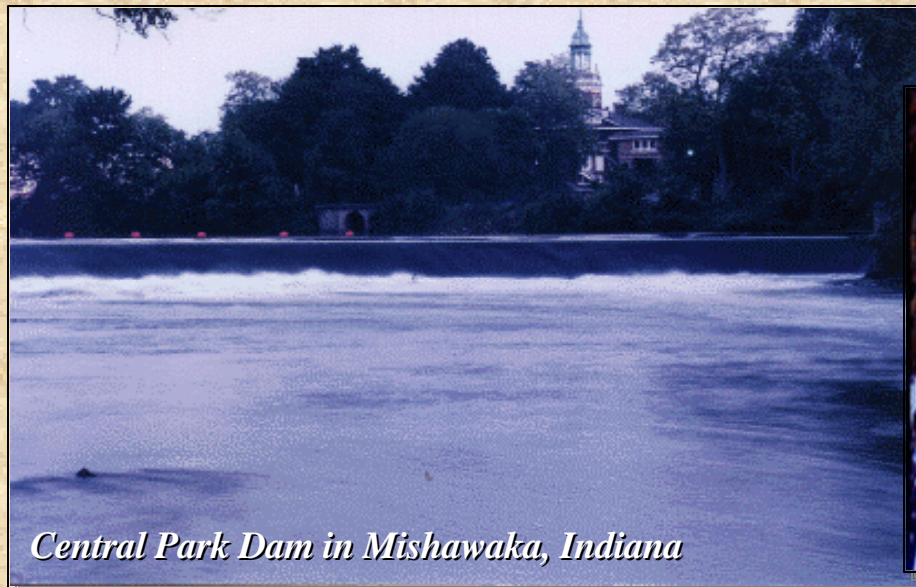
Watershed Management Plan Development Process

- ❖ Focus on a range of broad-based needs and initiatives
- ❖ Ongoing volunteer river cleanups & monitoring
- ❖ Facilitation and coordination of efforts to address nonpoint source pollution (atrazine and other agricultural pollutants)
- ❖ Basin-wide coordination and sustained local outreach and education
- ❖ Coordinate local participation in TMDL efforts along the river
- ❖ Overcome barriers posed by the watershed's large size and its bi-state nature

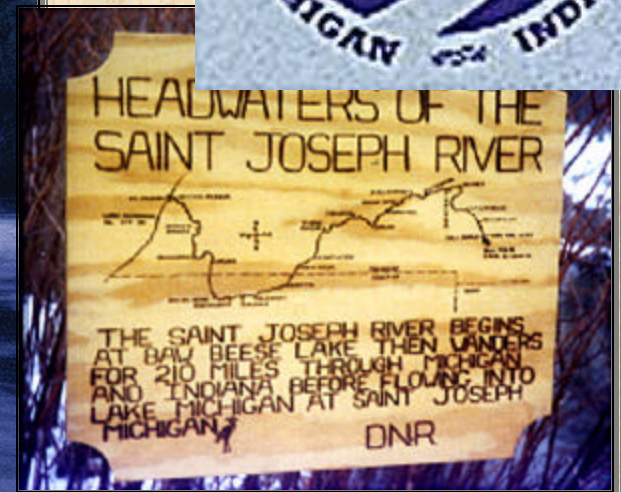


Project Implementation

- ❖ Friends (Administration)
- ❖ Executive Director (Project Manager)
- ❖ Steering Committee (Project Direction)
- ❖ K&A (Technical Consultant)
- ❖ Partners (Support)
- ❖ Stakeholders



Central Park Dam in Mishawaka, Indiana





Project Steering Committee (draft)

- ❖ **Potawatomi RC&D**
- ❖ **USGS**
- ❖ **St. Joe River Basin Commission**
- ❖ **Lake Michigan Federation**
- ❖ **Berrien County Drain Commission**
- ❖ **Hillside Drain Commission**
- ❖ **St. Joseph County MSUE**
- ❖ **Branch County Road Commission**
- ❖ **Cabbage Environmental Controls, Inc.**
- ❖ **Calhoun County Drain Commission**
- ❖ **St. Joe Conservation Club**
- ❖ **Michiana Watershed, Inc.**



Elements of an Approvable MDEQ Watershed Management Plan

- ❖ **Steering Committee Formation & Background Information Collection & Evaluation**
- ❖ **Drainage Basin Characterization**
- ❖ **Identification of Critical Areas/Needs**
- ❖ **Prioritization of Concerns**
- ❖ **Identify Improvement Opportunities**
- ❖ **Information Dissemination & Communication**
- ❖ **Public Education/Participation**
- ❖ **Watershed Management Plan Development**
- ❖ **Reporting**



Task 1. Steering Committee Formation & Background Info Collection & Evaluation

- ❖ **Formalize Steering Committee partners**
- ❖ **Compile and confirm designated uses/goals**
- ❖ **Assess known and identified threats and impairments**
- ❖ **Identify known contaminants impacting WQ**
- ❖ **Develop electronic bibliography of existing reports**
- ❖ **Develop Project Database reference list**
- ❖ **Create spatial linkages of database to GIS platform**

PRODUCTS:

- **List of designated uses/impairments**
- **Electronic bibliography for web posting**
- **Electronic database for the Friends**
- **Electronic maps posted on webpage and printable**



Task 2. Drainage Basin Characterization

- ❖ **Determine/confirm subdrainage areas**
- ❖ **Land use/land cover analysis (satellite data)**
- ❖ **Incorporate planning efforts completed or underway (i.e., TMDLs, River Basin Strategies, LaMP)**
- ❖ **Integrate GIS data from Tasks 1 and 2**

PRODUCTS:

- **Electronic Water Quality summary**



Task 3. Identify Critical Areas/Needs

- ❖ **Identify critical watershed areas based on: existing efforts, proposed efforts, suspected concerns, land cover sensitivity analysis**
- ❖ **Test process for developing/institutionalizing Road/Stream crossing inventory framework**
- ❖ **Test on two critical subwatersheds**
- ❖ **Synthesize existing data/needs**
- ❖ **Mobilize partners to field verify**
- ❖ **Conduct preliminary nonpoint source modeling**
- ❖ **Conduct contributing area analysis of subwatersheds and produce informative maps**

PRODUCTS:

- **Nonpoint source modeling report/results**
- **Post summary of two critical subwatersheds**



Task 4. Prioritization of Concerns

- ❖ **Develop prioritization scheme for:**
 - ✓ various watershed impairments
 - ✓ pollutants
 - ✓ geographic reach
 - ✓ sources
 - ✓ existing solutions/efforts/programs
 - ✓ potential costs/known available funding
- ❖ **Conduct prioritization based on Task 3**

PRODUCTS:

- **List of the primary (10) prioritized needs**



Task 5. Identify Improvement Opportunities

- ❖ **Compile and review available studies, programs, projects, policies river watershed initiatives**
- ❖ **Create a compendium of improvement projects by geographic reach, contaminant problems, funding sources, corrective measures, BMPs**
- ❖ **Develop a broad-based generalized menu to address concerns, resources, funding, partnerships, options**
- ❖ **Assess expected WQ improvements with options**
- ❖ **Identify next steps necessary for implementation and potential funding options**
- ❖ **Conduct cost-benefit analyses for prioritized improvement options**

PRODUCTS:

- **BMP menu/Implementation Options for priorities**



Task 6. Information Dissemination & Communication

- ❖ **Develop/maintain Project Website**
- ❖ **Website inclusion of all technical information**
- ❖ **Compile and post maps of watershed attributes**
- ❖ **Post Steering Committee information**
- ❖ **Collect/compile electronic feedback**
- ❖ **Post meeting schedules**
- ❖ **Obtain public feedback, solicit participation and disseminate information through website**
- ❖ **Include website elements such as: Links to other programs/sites, Current news/updates, Message board, Website search tools and On-line mapping**

PRODUCTS:


- **Operating website**
- **Web page content to the Friends at project end**

Task 6. Information Dissemination & Communication...



Untitled Document [st_joe_river/index2.htm] - Dreamweaver
File Edit View Insert Modify Text Commands Site Window Help

Welcome to the St. Joe River Watershed Page!




Watershed Management Plan

Friends of the St. Joe River

Atrazine

Where is the Watershed?



Web site hits Message from the Executive Director
last modified 11-17-02 Calendar Message Board

1127 x 876 - 246.77 sec 35 (L) [System tray icons]



Task 7. Public Education/Participation

- ❖ **Obtain, discuss and integrate public comments into final plans (via Steering Committee)**
- ❖ **Develop and promote educational programs through existing partnerships and programs targeting general audiences as well as those for critical areas**
- ❖ **Develop and distribute project brochure/flyers**
- ❖ **Coordinate with regulatory agencies on new efforts**
- ❖ **Conduct two watershed-wide meetings per year**

PRODUCTS:

- **Educational Programs: two workshops per year (schools and/or general audiences)**
- **Watershed-wide meetings**
- **Project brochure/flyer (1,500 copies)**



Task 8. Watershed Management Plan

- ❖ Determine jurisdictional interests, needs and objectives
- ❖ Determine overlap of WQ protection programs
- ❖ Identify planning needs/opportunities for improvements
- ❖ Define options in relation to overlapping programs
- ❖ Identify overlapping jurisdictional opportunities
- ❖ Assess cross-state program opportunities/agreements
- ❖ Compile model ordinances and other tools
- ❖ Identify mechanisms to institutionalize watershed protection
- ❖ Develop flexible watershed management plan framework
- ❖ Establish system for determining success/tracking
- ❖ Define funding opportunities for implementation
- ❖ Define future monitoring needs (frequency, location, parameters)
- ❖ Identify funding options for sustained monitoring
- ❖ Facilitate consistent road/stream crossing inventories
- ❖ Facilitate partnering relationships
- ❖ Complete a MDEQ-approvable watershed management plan

PRODUCTS:

- Watershed Management Plans (posted electronically)
- Five hard copies, 15 CD Roms)



Task 9. Reporting

- ❖ **Quarterly Reports**
- ❖ **Friends ED review**
- ❖ **Draft products to DEQ Project Administrator**
- ❖ **Continual updates and tracking on website**
- ❖ **Project Fact Sheet**

PRODUCTS:

- **Quarterly Summary Reports**
- **Final Report (DRAFT)**
- **Final Report (FINAL) (hard copies, website)**
- **Project Fact Sheet (hard copies, website)**

A St. Joe River Watershed Management Plan...

*Bridging the Past to the
Future of this Shared Resource*

