



**Federal Clean Water Act  
Section 319 Grant**  
2005-0001



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## ST. JOSEPH RIVER WATERSHED

## PLANNING PROJECT

### SUPPLEMENTAL TASKS

November 1, 2004 through June 30, 2005

The Friends of the St. Joseph River was awarded a DEQ Section 319 nonpoint source grant to develop a watershed management plan for the St. Joseph River watershed. During the project, the U.S. Environmental Protection Agency issued new requirements for watershed management plans funded through Section 319 grant monies. These requirements call for additional quantification of sources of pollutants and expected reductions in pollutants with recommended best management practices (BMPs). The project reported in this fact sheet thus conducted additional tasks beyond the planning project work plan to ensure the Management Plan--the final product of the planning grant--meets the Nine Elements. It used a watershed GIS-based modeling approach to quantify potential load reductions and associated costs for nutrients and pesticides with BMPs applied in three agricultural tributary watersheds. Models used included SWAT (Soil and Water Assessment Tool) and Landscape Analyst.

**Grant Amount: \$21,600**

**Match Funds: \$19,300**

**Total Amount: \$40,900**

#### Best Management Practices (modeled)

- Conservation tillage (no-till)
- Nutrient management
- Edge-of-field filter strips
- Contour farming



#### Annual Load Reductions (estimated)

- e.g.: 13,600 lbs of phosphorus in the Elkhart River watershed with 75% implementation rate of no-till.
- Load reductions of nitrogen, sediment, and atrazine in other two major agricultural tributary watersheds were also estimated for each of BMPs.

#### I&E Activities:

- Reports of the work published on the website developed for the project ([www.stjoeriver.net](http://www.stjoeriver.net))
- Results from the work were used to develop the watershed management plan.



#### Partners involved:

- Friends of the St. Joseph River
- Michigan DEQ
- Indiana Department of Environmental Management
- USDA-NRCS
- US EPA Region V
- Kieser & Associates

**Table 8. Load reduction (%) by BMPs as manifested at the mouth of the Fawn River (model estimates)**

	Application rate (% of total land)	
	25%	75%
<b>Sediment</b>		
Nutrient management	0.0	0.0
No-till	5.6	39.5
Edge-of-Field filter	6.9	39.6
Contour farming	8.3	33.5
Combination of above	10.3	61.4