



Michigan's
Nonpoint Source
Program

Federal Clean Water Act Section 319 Grant

Tracking code: 2007-0152



City of Sturgis

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City of Sturgis Sustainable Storm Water Demonstration

March 1, 2008 through September 30, 2011

The St. Joseph River Watershed (4,685 acres) is composed of 217 subwatershed units, including the Nye Drain, a tributary of the Fawn River. The Nye Drain is impacted by a variety of nonpoint source pollutants, including excessive sediment, toxins, and excessive nutrients. The source of these pollutants is attributed, in part, to urban runoff. Through this project, the City of Sturgis (City) had the opportunity to make a significant contribution to the improvement of water quality and flow regime stability for the Nye Drain. In accordance with the recommendations of the St. Joseph River Watershed Management Plan, the City installed Low Impact Development (LID) techniques at Memorial Park and the Public Services Utilities Building. These implementation projects were the first step to incorporating LID techniques into City projects. Other project tasks included a LID educational campaign and an update of the City's storm water design criteria manual.

Grant Amount: \$536,124.60

Match Funds: \$201,063.58

Total Amount: \$737,188.18

Best Management Practices at Memorial Park:

- Porous asphalt parking lot
- Porous concrete sidewalk
- Rain garden and retention basin



Best Management Practices at Public Services

Utilities Building:

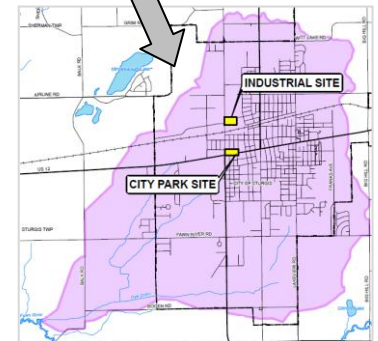
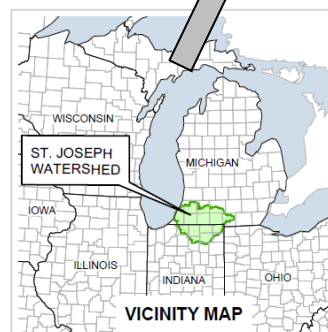
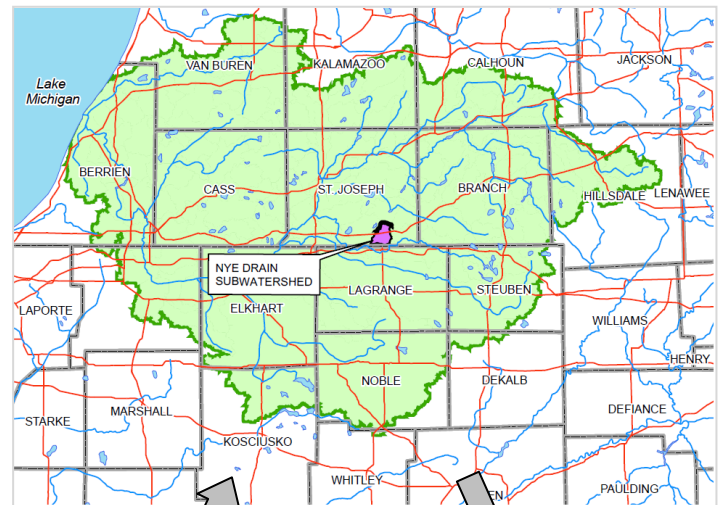
- Infiltration trench
- Infiltration bed
- Green roof
- Storm water reuse unit
- Two oil and grit separators
- Bioretention area

Annual Load Reductions:

- 3.3 tons of sediment
- 24 pounds of phosphorus
- 143 pounds of nitrogen

I&E Activities:

- Three educational signs
- LID brochure and site tours
- Council/Commission meeting updates
- City website/blog/e-wire updates
- Maintenance manuals for LID elements
- Meetings to present LID development standards
- Professional magazine/newsletter articles
- Project registration on SEMCOG and FotSJR websites



Partners involved:

- City of Sturgis Mayor and City Commission
- City of Sturgis Professional Staff
- City of Sturgis Electric Department
- FTC&H, Inc.



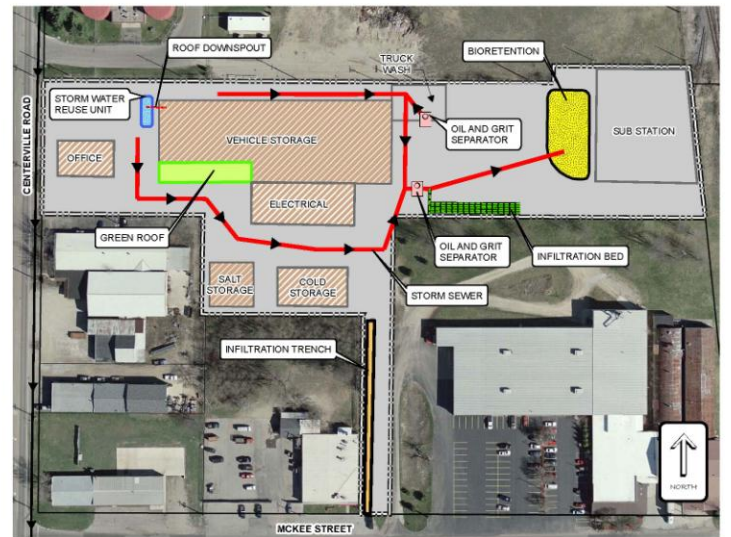
Memorial Park (Before): Park is located at the intersection of Chicago Road (US-12) and Centerville Road in Sturgis, Michigan. Prior to the project, storm water runoff from a 24-acre residential neighborhood north of the park was conveyed to the storm sewer system in Centerville Road.



Memorial Park (After): A storm sewer from the residential neighborhood was diverted to the park. A porous sidewalk and parking lot, rain garden, and a retention basin were installed to infiltrate storm water runoff on site.



Public Services Utilities Building (PSUB) (Before): PSUB is located at the intersection of Centerville Road and McKee Street in Sturgis, Michigan. Storm water runoff previously would have transported sediment, nutrients, and salt to the storm sewer system.



Public Services Utilities Building (PSUB) (After): Low Impact Development (LID) techniques were used to better manage storm water on site. Storm water is either infiltrated into the soil or reused for irrigation and wash water.