Section 319
NONPOINT SOURCE PROGRAM SUCCESS STORY
Illinois

Best Management Practices Reduce Siltation from Urban Runoff

Waterbodies Improved

Urban runoff caused siltation of two segments of the Des Plaines River. The Illinois Environmental Protection Agency (EPA) determined that the excess sediment prevented the segments from supporting their designated uses for aquatic life and added them to the 2002 Clean Water Act (CWA) section 303(d) list of impaired waters. Implementing best management practices (BMPs) using CWA section 319 funds enhanced water quality and helped reduce total suspended solids (TSS) and sedimentation/siltation. In 2008 the Illinois EPA removed both segments from the state's 2008 CWA section 303(d) list of impaired waters for TSS and sedimentation/siltation.

Problem

The Des Plaines River (Figure 1) flows 150 miles (241 km) through southern Wisconsin and northern Illinois, eventually meeting the Kankakee River west of Channahon to form the Illinois River, a tributary of the Mississippi River. The slow-moving Des Plaines River flows primarily through Wisconsin marshland before crossing into Illinois, at which point, it flows west through woodland forest preserve districts in Lake County and Cook County (and through the city of Des Plaines), northwest of Chicago. Numerous small, fixed dams cross the river starting in central Lake County and continuing through Cook County. Eventually, the river turns to the southwest and joins with the Sanitary and Ship Canal in Lockport before flowing through the city of Joliet.

The Des Plaines River transforms from a prairie creek to a suburban stream, to a large urbanized river, and then finally to a major industrial waterway. This success story focuses on two river segments in Cook County, the 5.14-mile segment known as G-30 and the 6.11-mile segment known as G-32 (Figure 2).

In its 1990–1991 Illinois Water Quality Report, the Illinois EPA first identified siltation, resulting from urban runoff and hydrologic and habitat modifications, as a cause of impairment for segments G-30 and G-32. Suspended solids appeared as a cause of impairment for the segments until Illinois EPA's 2000 Illinois Water Quality Report. The 2002 Illinois CWA section 303(d) list of impaired waters identifies those segments of the river as not supporting their designated uses for aquatic life, in part because of TSS and sedimentation/siltation.

Figure 1. The Des Plaines River flows through southern Wisconsin and northern Illinois.

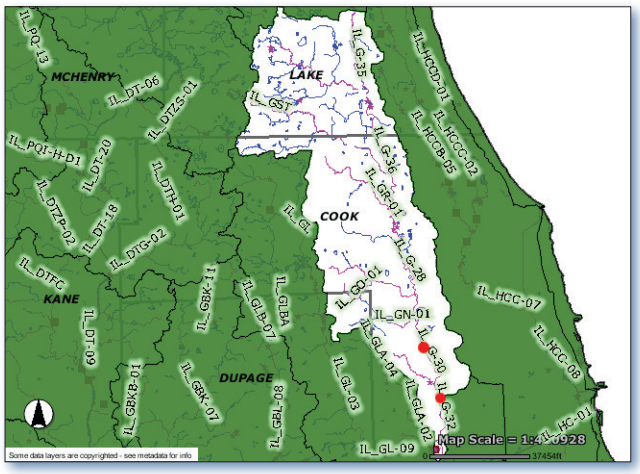

Figure 2. Segments G-30 and G-32 are in the lower Des Plaines River watershed.

Project Highlights

The Illinois EPA completed four nonpoint source pollution control projects funded under CWA section 319. The projects included implementing numerous BMPs, such as stabilizing 2,920 feet of shoreline and 7,576 feet of streambank; building one urban stormwater wetland; restoring 5.78 acres of wetlands; improving woodlands; and installing two cisterns, two grade-stabilization structures, five infiltration trenches, nearly an acre of porous pavement, one rain garden and one rock outlet protection practice (an apron of heavy rock placed at the outlet end of a culvert to reduce erosion).

Results

Water quality monitoring shows that TSS concentrations are below the state standard of 116 milligrams per liter (mg/L). As a result, the Illinois EPA removed TSS and sedimentation/siltation from the 2008 list of impairments for segments G-30 and G-32 of the Des Plaines River (Figure 3).

Partners and Funding

Contributing a total of $968,555 of CWA section 319 funds, the Illinois EPA partnered with local stakeholders to implement four nonpoint source pollution control projects involving BMP implementation in the Des Plaines River watershed. In addition to BMPs, project partners completed several education and information projects addressing nonpoint source pollution. The Illinois EPA also partnered with the Chicago Metropolitan Agency for Planning and the Lake County Stormwater Management Commission to develop a 2008 watershed-based plan for Indian Creek, a tributary to the Des Plaines River.

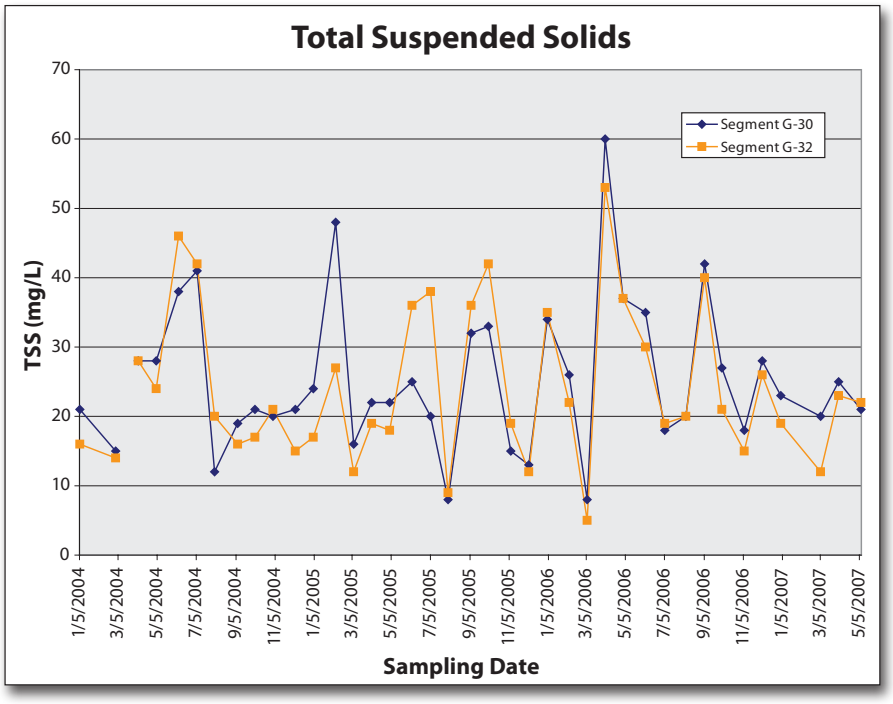

Figure 3. Data show that TSS levels in segments G-30 and G-32 are well below the TSS water quality standard maximum of 116 mg/L.

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