

# INDIANA'S CONSERVATION SHOWCASE

*Helping People...*

*...Help the Land*



## Bull Run/West Creek Watershed Project– Lake County Indiana



*Bill Moran, District Conservationist shows waste storage structure*



*Grassed waterway and lined channeled buffer*



*Local landowners showing no-till injection of animal waste*

### PROBLEM

The Bull Run/West Creek watershed is in north-west Indiana's Lake County, in the Kankakee River Basin. Bull Run, a 6.04-mile-long stream in the watershed's headwaters, joins St. John Ditch to form West Creek, which flows 19.05 miles before emptying into Singleton Ditch. Bull Run lies within an agricultural area, while its confluence with St. John Ditch at West Creek lies within a predominantly urban area.

Data showed that areas of the watershed failed to support healthy biotic communities. Biotic communities are considered impaired on the basis of the narrative water quality standards and the fish Index of Biotic Integrity (IBI), a measurement of stream health based on multiple attributes of the resident fish population. An IBI score of 36 or greater is considered supportive of a healthy biotic community; a score below 36 indicates that the biotic community is impaired.

Bull Run data collected in 1999 revealed a fish IBI score of 0, and West Creek data collected in 2004 and 2005 showed an IBI score ranging from 16 to 32. As a result, IDEM added both Bull Run (in 2002) and West Creek (in 2008) to the state's Clean Water Act (CWA) section 303(d) list of impaired waters because of impaired biotic communities (aquatic life).

IDEM identified nonpoint source runoff as the main contributor to the biotic community impairment. Key pollutant sources in the watershed included runoff from row crops, improper manure spreading, livestock with direct access to streams, leaking and failing septic systems, stream bank erosion and urban storm water runoff.

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## PARTNERS

The Northwest Indiana Regional Planning Commission worked closely with the Lake County Soil and Water Conservation District; NRCS regional conservation staff; and a number of state and local partners, including the Indiana Department of Natural Resources, the Indiana State Department of Agriculture, and the Lake County Health Department. Partners contributed resources to support educating landowners, identifying pollutant sources and critical areas for potential water quality improvement projects, and conducting outreach to stakeholders.

## SUCSESSES

Water quality monitoring data collected in 2011 show that IBI scores in Bull Run and West Creek have improved. The scores now meet or exceed an IBI score of 36, indicating that the biotic community is no longer impaired (Figure 1). Therefore, IDEM will propose to remove both segments (25.09 miles total) from the state's CWA section 303(d) list in 2012.

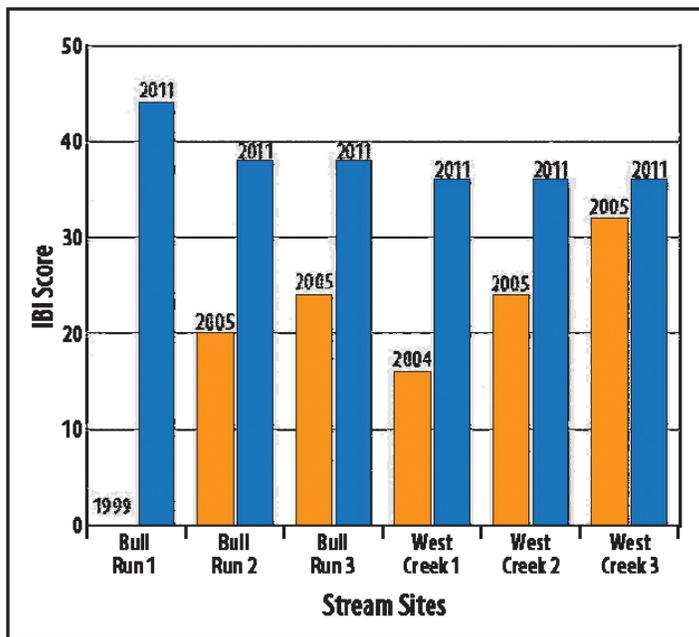


Figure 1: Biological data show that water quality has improved in the Bull Run/ West Creek Watershed

## PROGRAM HIGHLIGHTS AND FUNDING

Since 1990 IDEM has supported nine CWA section 319 and 205(j) projects in the greater Lake County area. Project funds were used to develop a comprehensive watershed management plan, identify critical areas and priority actions to improve water quality, and implement demonstration BMPs to control sediment loading and erosion in urban areas.

Between 1997 and 2004, IDEM staff used CWA section 319 funds to help local farmers implement controlled tillage BMPs and identify additional federal funding opportunities to support BMP implementation. **Since 2004 the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) staff have provided support to local landowners.** These combined efforts have led to an 80 percent rate of adoption of controlled tillage practices among farmers in the watershed. Furthermore, a number of farmers have adopted never-till crop-ping practices, in which agricultural fields are never disturbed through tillage.

**In addition to technical assistance, since 1996 NRCS has spent an average of \$120,000 per year in Farm Bill funding in the Bull Run/West Creek watershed to promote conservation practices, particularly controlled tillage practices.** Funding for the conservation practices installed have been distributed from the EQIP, WHIP and CSP programs.

### EQIP Practices

- 1284 Acres for No-till and Nutrient and Pest Management
- 70 Acres of TSI
- 100 Acres of Pre-scribed Grazing
- 510 Acres of Waste Utilization
- one CNMP on 152 acres
- one waste storage structure

### WHIP Practices

- 23 Acres of Wildlife Habitat

### CSP Practices

- 12.1 Acres of Grassed Waterways
- 29.5 Acres of Filter strips
- 37.4 Acres of Tree Planting
- 4, 775 Feet of Windbreak or 4.0 Ac.
- 228.9 Acres of Buffers & Wildlife Habitat including Quail Habitat, Pollinator Habitat, Contour Buffers Strips, Wet and Upland Prairie Plantings
- 48.9 Acres of Wetland Restoration

