

DECATUR, INDIANA: A SUCCESSFUL STORMWATER PROGRAM

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The City of Decatur (population 8,500) is located in Adams County in northeastern Indiana. The St. Marys River is the most prominent waterbody in the city. Smaller watersheds within Decatur's city limits include Holthouse Ditch, Kohne Ditch, and Borum Run.

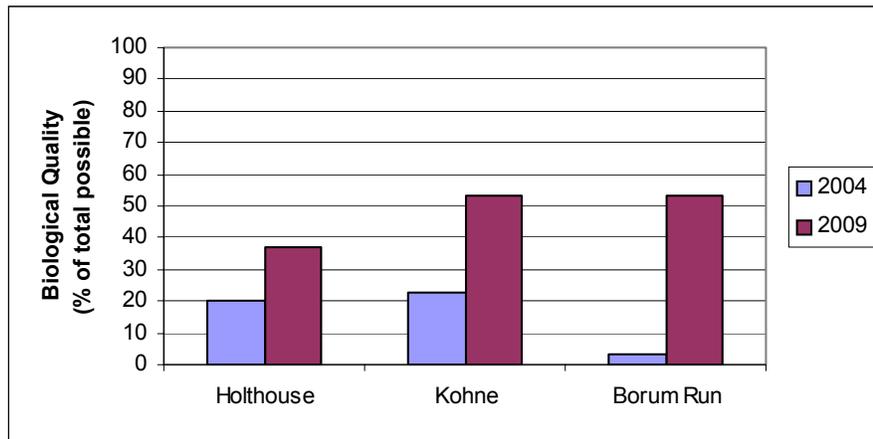
Like many other Indiana cities, Decatur has a storm water permit which requires a "baseline characterization" of the quality of surface water within the city's jurisdiction. The original baseline characterization was carried out in 2004 by Commonwealth Biomonitoring. This study was done using a bioassessment technique, which quantifies the number and kinds of aquatic life present in area streams to measure their ecological health. The technique results in a biological quality value (biotic index) that is expressed as a percentage of the maximum possible value.

The first study in 2004 showed that all three sites examined on the smaller streams were ecologically degraded, compared to biological values from "reference" streams in the same ecoregion. The degraded conditions were related to lower water quality from excessive sediment deposits. Borum Run was especially affected. It supported few forms of aquatic life.

During the next five years, the Decatur stormwater program, under the direction of city stormwater specialist Joan Eichhorn, began to implement "best management practices" to reduce or eliminate water pollution caused by stormwater runoff. The city began to enforce the Indiana stormwater regulation (Rule 13). Regular catch basin cleaning began. Existing storm sewers were repaired and hydro-separators were installed to catch pollutants before they entered local streams. Several illicit septic discharges were identified and eliminated.

Each site was then re-examined in July 2009 using the same bioassessment technique previously employed. The sampling showed that during the five years since the storm water program began, the ecological health of the three streams (as measured by their biotic index values) have significantly improved. The stormwater program in the city of Decatur has resulted in significant improvements to water quality in city streams.

Improvements in ecological health in study streams from 2004 to 2009



Caddisfly larva, an animal requiring good water quality. They have increased in abundance since 2004.



Mayfly nymphs also require good water quality. They have also increased in abundance.



Midge larvae are considered to be tolerant of poor water quality. They were the most common animal found during the 2004 survey, but have decreased in abundance since the stormwater program has been carried out.



Borum Run



Holthouse Ditch



Kohne Ditch

