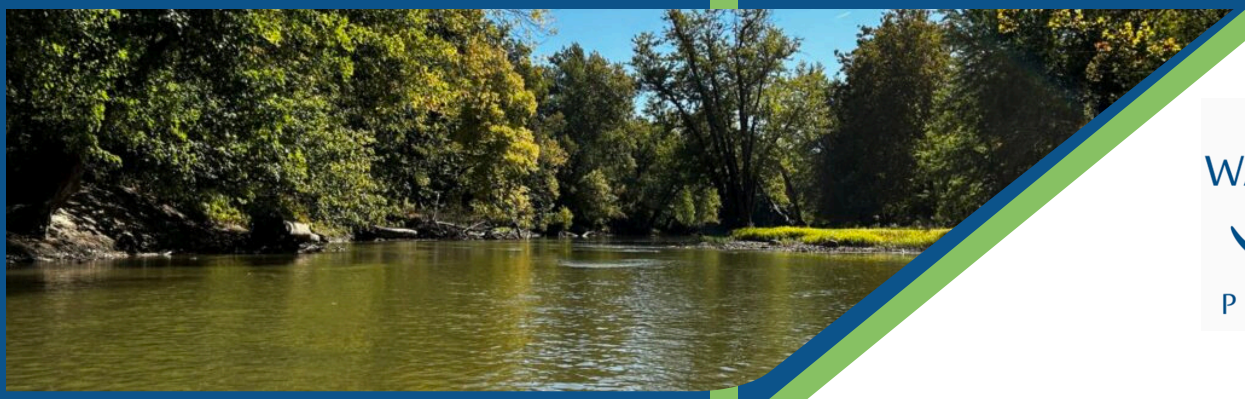


ST. JOSEPH RIVER WATERSHED INITIATIVE PARTNERSHIP

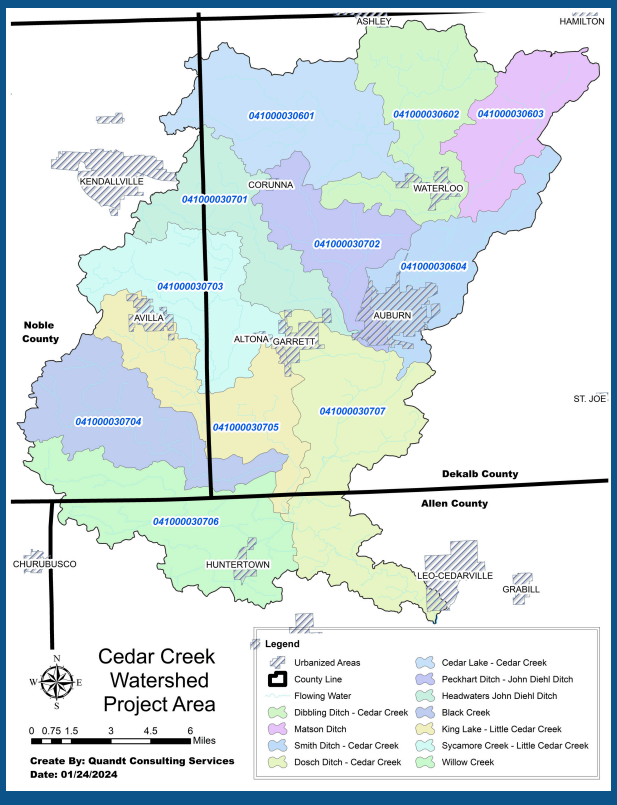
CREATING A WATERSHED MANAGEMENT PLAN

Aquatic macroinvertebrates are used as indicator species of stream quality because they are affected by the stream's physical, chemical, and biological conditions. They can't escape pollution and indicate the effects of short and long-term pollution.

Water quality monitoring took place biweekly for seven months at 12 locations to determine pollution types and loads. Water sampling investigates many parameters, but phosphorus, nitrogen, E.coli, and sediment are just a few.

A windshield survey is done by driving every road in the watershed and writing down what is seen. This is specifically useful when determining if there is a streambank or field erosion or if livestock can access open water.

A desktop survey is done to research the project area in depth. Through this research many things are analyzed such as soil types, population, land use break down, and location of combined sewer overflows.



CEDAR CREEK PROJECT

Cedar Creek is one of the most beloved waterways in Northeast Indiana. With 13.7 miles designated a State Natural, Scenic, and Recreation River by the Indiana Natural Resources Commission, it is a popular recreational waterway. In recent years, the land in the watershed that remains primarily agricultural production has been significantly developed to support the 15% population growth since 2005. In 2005, a watershed management plan was developed for Cedar Creek to help maintain and improve its water quality. However, the goals of that watershed have not been met nearly 20 years later. For this reason, a new comprehensive watershed management plan is in development and will be completed in 2025.

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PROJECT GOAL STATEMENTS

E.COLI

The goal of this project is to have 50% of water quality samples meet the state standard of 235cfu/100ml for E. coli by 2030, 75% by 2040, and 100% of samples meet the state standard by 2050.

SEDIMENT

Reduce TSS loads by 15% by 2030, 35% by 2040, and 43% by the year 2050. TSS loads need to be reduced to 6,980 tons/year in the Cedar Creek watershed to meet target loads. According to the calculated load reductions, it would require a 42.6% annual reduction in TSS loading to meet target loads.

TOTAL PHOSPHORUS

Reduce total phosphorus loads by 20% by 2030, 40% by 2040, and by 60% by the year 2050. Total phosphorus loads need to be reduced to 204,212 lbs/year to meet target loads. According to the calculated load reductions, it would require a 60% annual reduction in TP loading to meet target loads.

DISSOLVED REACTIVE PHOSPHORUS

Reduce dissolved reactive phosphorus (DRP) loads by 20% by 2030, 40% by 2040, and by 60% by the year 2050. DRP loads need to be reduced to 16,231 lbs/year to meet target loads. According to calculated load reductions, it would require a 60% annual reduction in DRP loading to meet target loads.

NITROGEN

Reduce nitrate+nitrite loads by 10% by 2030 and by 18% by year 2040. Nitrate+nitrite loads need to be reduced to 870, 800 lbs/year to meet target loads. According to the calculated load reductions, it would require a 17.4% annual reduction in nitrate+nitrite loading to meet target loads.

STORMWATER

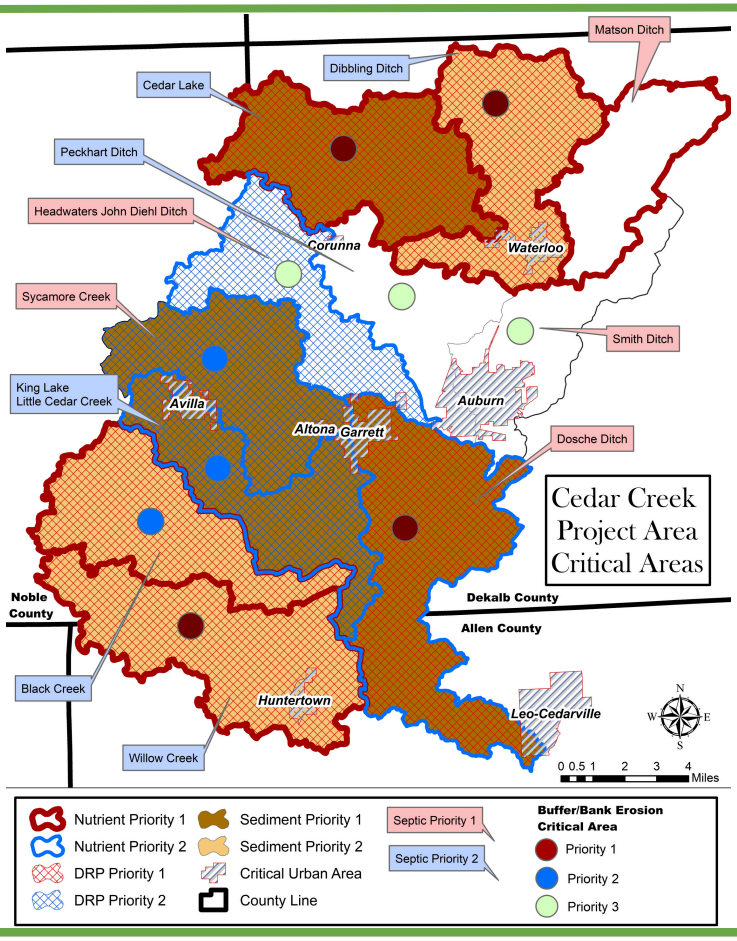
Partner with developing urbanized areas to implement their Long-Term Control Plans (if applicable) and green infrastructure to reduce the impact of stormwater on water quality by providing stormwater education and outreach by 2026 and offering cost-share assistance on stormwater BMPs by 2028.

INCREASE RIPARIAN BUFFERS

It is the goal of this project to have at least 20% of parcels adjacent to open water at headwater stream to have riparian buffers that meet NRCS standards and specifications by 2030, 50% of parcels by 2040, and 75% of parcels by 2050. Five percent of the buffers will be forested riparian buffers.

Critical Areas

Critical areas are those experiencing the most significant problems and impairments producing disproportionately high pollutant loads where better management practices are needed. Based on the windshield and desktop survey results and water quality monitoring and calculated load reductions, critical areas were determined for addressing nutrient loads, dissolved reactive phosphorus, buffer width and streambank erosion, sediment loads, and failing or leaking septic systems. These critical areas will be addressed when doing future implementation projects to meet the goals of this project.



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