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DUCK CREEK TRIBUTARY RESTORATION IN NW INDIANA TO IMPROVE WATER QUALITY AND WATERSHED HEALTH

Photo courtesy of Maha Issa

Delta Institute is restoring a key waterway in Hobart, Indiana, that flows throughout the entire watershed and ultimately into Lake Michigan. Currently the waterway, the Duck Creek Tributary, overflows with pollution, sediment, and toxins—impacting the water quality downstream for many communities, including multiple that are designated Environmental Justice (EJ) communities.

Why our work is needed today

The Duck Creek Tributary in Hobart, Indiana is part of the Deep River-Portage Burns Waterway Watershed, which flows into the Little Calumet River and ultimately into Lake Michigan. The extensive flooding along the Tributary causes significant water quality issues due to sediment, agricultural, and nutrient runoff. Streambank restoration along this segment of the Duck Creek Tributary will reduce flooding, improve water quality, restore natural habitat and ultimately contribute to improved conditions for wildlife, recreation, and communities throughout the watershed in Northwest Indiana.

Our restoration efforts directly align with identified issues per local-, watershed- and regional plans. The Great Lakes Restoration Initiative Action Plan and 2020 Indiana State Forest Action Plan calls for restoring forests in riparian areas and asserts a forested buffer around perennial watercourses improves water quality, wildlife habitat and protects soil resources by buffering runoff and improving infiltration/water quality. The need for these improvements to the water quality and streambank habitat in the Tributary to Duck Creek is a component of the Deep River Portage Burns Waterway Watershed Management Plan. Delta always ties our programmatic efforts into existing plans.

Brief Overview of What We're Doing

Delta Institute is assisting the City of Hobart and the Hobart Sanitary District (HSD) to implement streambank stabilization and restoration, and to install a riparian buffer that improves permeability and infiltration along the Tributary corridor within two distinct phases of work. The first phase was completed in Summer 2023, and exceeded key metrics—including capturing **50% more stormwater**

gallons and **more than 20 times more sediment** than previously forecasted via restoration on **3.7 acres of riparian corridor with 1,100 linear feet of perennial stream**.

For the second phase of work ongoing from 2023-2025, Delta is providing project management and oversight, and is supporting procuring and retaining contractors that specialize in water resource engineering and wetland and streambank restoration. Second phase efforts increase stormwater capacity and infiltration, reduce nonpoint source pollution from entering the creek, prevent erosion and damage to surrounding infrastructure, and improve the instream and riparian habitat.

Our Project's Impact

We anticipate achieving the below goals:

- Reduce runoff contamination (via removing 4,612lbs of Phosphorus and 16,564lbs of Nitrogen, annually) and improve water quality in the Tributary;
- Remove invasive species and restore natural habitat within the Tributary;
- Reduce erosion and sedimentation along the Tributary and provide a model for achieving sediment reductions for similar types of projects in the watershed;
- Improving in-stream and riparian habitat quality; and,
- Support climate resiliency in the City of Hobart by improving its infrastructure to manage overbank flooding and promote infiltration by improving the Tributary's capacity via 165,888 untreated stormwater gallons infiltrated annually.

Our partners and collaborators

This project was supported by the Environmental Protection Agency's Great Lakes Restoration Initiative under grant number GL00E03114 as well as the National Fish and Wildlife Foundation's Chi-Cal Rivers Program, and the Dr. Scholl Foundation. We appreciate their generosity and support of our restoration efforts.

Delta Institute would like to thank our project partners, the City of Hobart and the Hobart Sanitary District (HSD), Northwestern Indiana Regional Planning Commission (NIRPC), Stantec, and Baxter and Woodman.

More about who we are

This project is part of Delta's Nature-Based Climate Solutions initiative, which assists municipalities by integrating natural climate solutions and GI to reduce climate change impacts by capturing 100 million stormwater gallons and leveraging $100 million in municipal GI investment.

We work every day to create a more resilient region for all our Midwestern family, friends, and neighbors.

Please join our efforts and help us today.

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Delta Institute collaborates with communities to solve complex environmental challenges throughout the Midwest.

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Delta Institute is a 501c3 nonprofit with a 2023 Platinum Seal of Transparency from GuideStar and a Four-Star Rating from Charity Navigator for our strong financial health and accountability.