DRENNAN DITCH

Two-Stage Ditch Installation and Sediment Removal for Nutrient Reduction

Construction will soon start for a 2.25-mile stretch of Drennan Ditch to improve water quality and improve flood storage capacity. The County's contractors will remove an estimated 13,500 tons of sediment from the ditch bed from the start of Drennan Ditch just east of S. Raab Rd. to N. Meilke Rd. They will also construct a two-stage ditch on the north side of the first 840 linear feet of Drennan Ditch.

Construction Timing

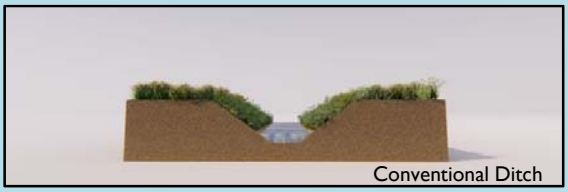
Weather permitting, sediment removal, upland management of dredged sediments, and two-stage ditch construction could begin as soon as late February 2021 and is expected to be complete by June 30, 2021.

Project Location

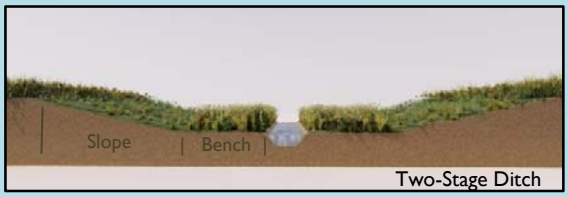
The Drennan Ditch project area is within the Swan Creek Watershed, which drains approximately 204 square miles in northwestern Ohio and is a tributary of the Maumee River and the western Lake Erie basin.

The two-stage ditch installation will be at the confluence of Prairie Ditch and Frankfort Ditch that drain almost 10,000 acres of cultivated cropland combined.

Photo date: March 2019



Conventional Ditch



Two-Stage Ditch

Drennan Ditch Hybrid Design

What is a Two-Stage Ditch?

A two-stage ditch is a widened ditch with a deep bench that serves as a floodplain area that creates more flood storage capacity and habitat while providing an opportunity for sediment suspended in the water column to drop out.

What is the Design Plan at Drennan Ditch?

The westernmost 840 linear feet of Drennan Ditch will be converted to a two-stage ditch with a 10-foot-wide lower stage channel and a 16-foot-wide bench along the north side of the ditch. The ditch bank above the bench will rise at a 4:1 slope and will be seeded with native plants. Erosion control matting will be placed along the top half of the bank after construction to stabilize the ditch.

Anticipated Benefits

Drennan Ditch improvements will contribute to nutrient load reductions in the western Lake Erie basin. Nutrients flowing from watersheds into Lake Erie are the primary cause of harmful algal blooms in the lake. Project activities are anticipated to:

- Reduce phosphorus loading by 19,100 pounds
- Remove 13,500 tons of sediment

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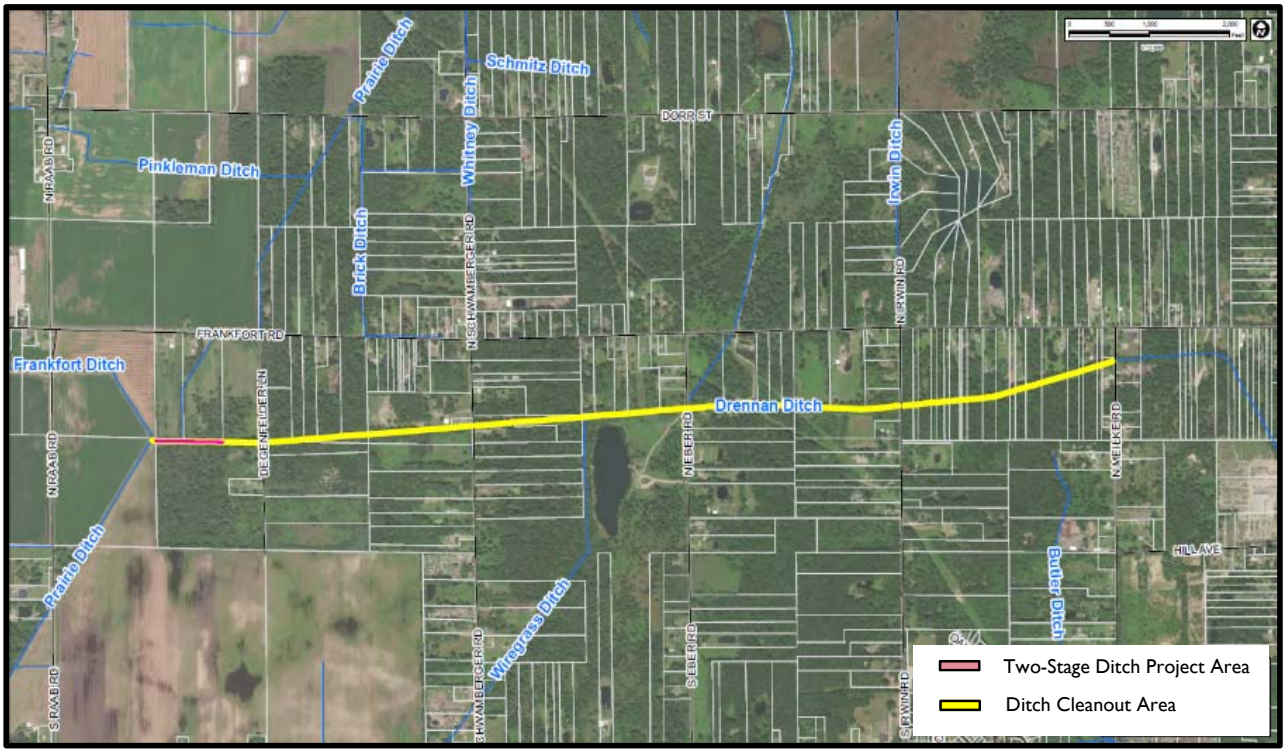
Project Location



Why Was This Location Selected?

This Drennan Ditch improvement project was initially selected as a result of requests by Spencer Township Trustees and local residents to help improve the ditch due to significant nearby flooding. This ditch has not been improved since the 1930s and there is a large accumulation of sediments – up to 3.5 feet within the project area. As the Lucas County Engineer's Office was making plans for sediment removal and management, it became apparent that incorporating a two-stage ditch could reduce overall nutrient loading and increase flood storage capacity in the watershed.

Construction Details

Construction activities can take place from 7:00 a.m. – 9:00 p.m. The County does not anticipate that noise levels will be disruptive to nearby residents. The County also does not anticipate that dust or mud will be an issue, as the contractor is instructed to note such conditions and take necessary steps to minimize them. Erosion controls will be used as appropriate. The Lucas County Engineer's Office is eager to move forward with this important project. Please contact our office if you have any questions or if you encounter any challenges associated with construction activities.

Project Funding

This project is funded through a $200,000 grant from the Great Lakes Commission's Great Lakes Sediment and Nutrient Reduction Program (funded through the Great Lakes Restoration Initiative) and Spencer Township.

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