

Funding Provided by USEPA via the Great Lakes Restoration Initiative



# Overview

- \$600,000 grant through GLRI funding to restore 800 LF of Willow Creek and riparian areas within Eaton Twp. Community Park
- Also funded native wetland & riparian plantings along Fortune Ditch within the Margaret Peak Nature Preserve

# The Project Was Designed To:

- Restore an active floodplain and create bank-full benches to allow flood storage
- Improve water quality through assimilation of sediment/nutrients during high flows when loading is prevalent
- Create stream habitat & provide stability through installation of riffles, rock toe, and live stakes
- Restore riparian habitat through native plantings

# Pre-Construction Conditions

- Floodplain was disconnected from channel





# Pre-Construction Conditions Cont.

- Vertical, erosive banks and incised channel



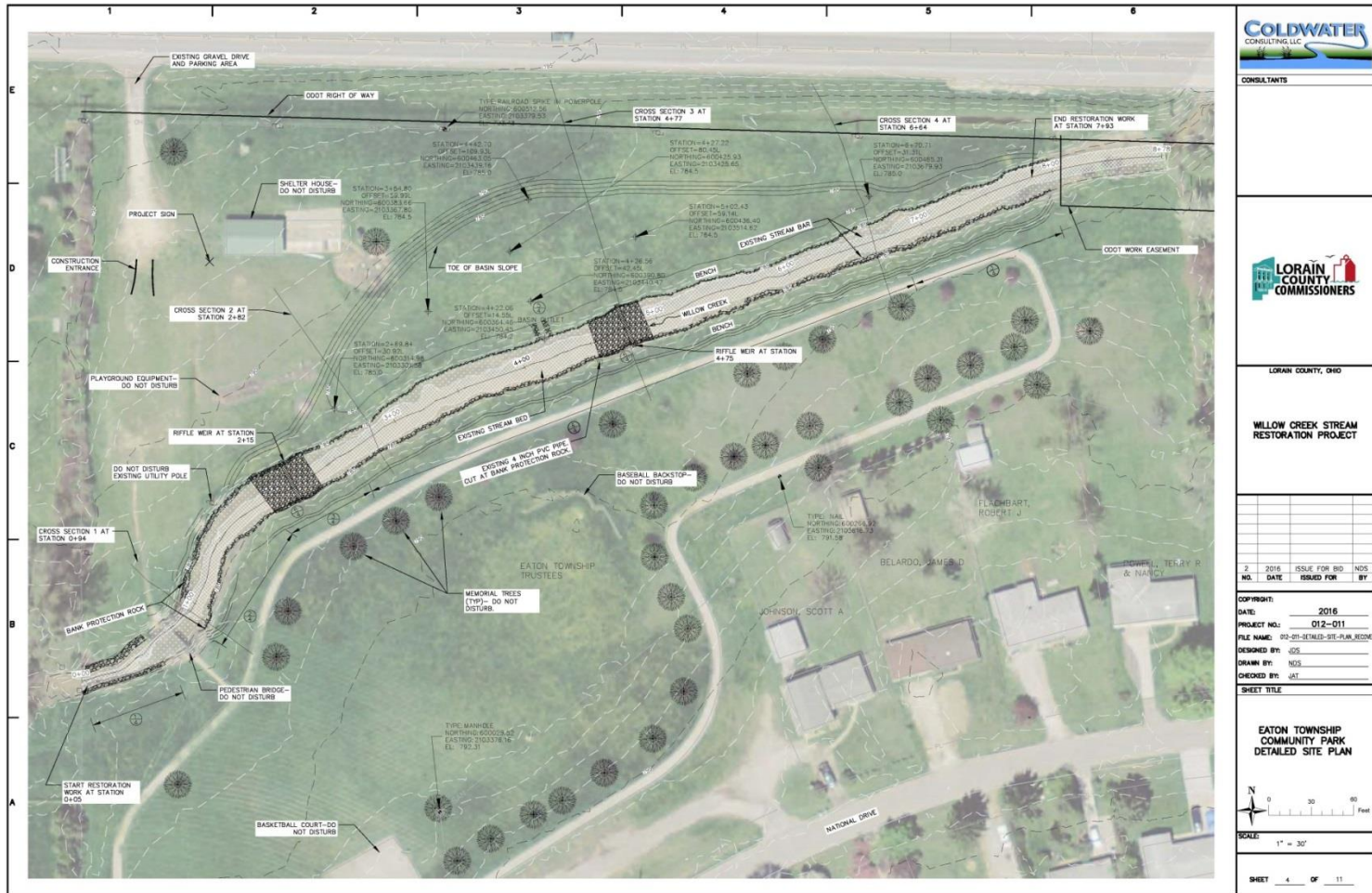
# Pre-Construction Conditions Cont.

- Absent riparian buffer & in-stream habitat

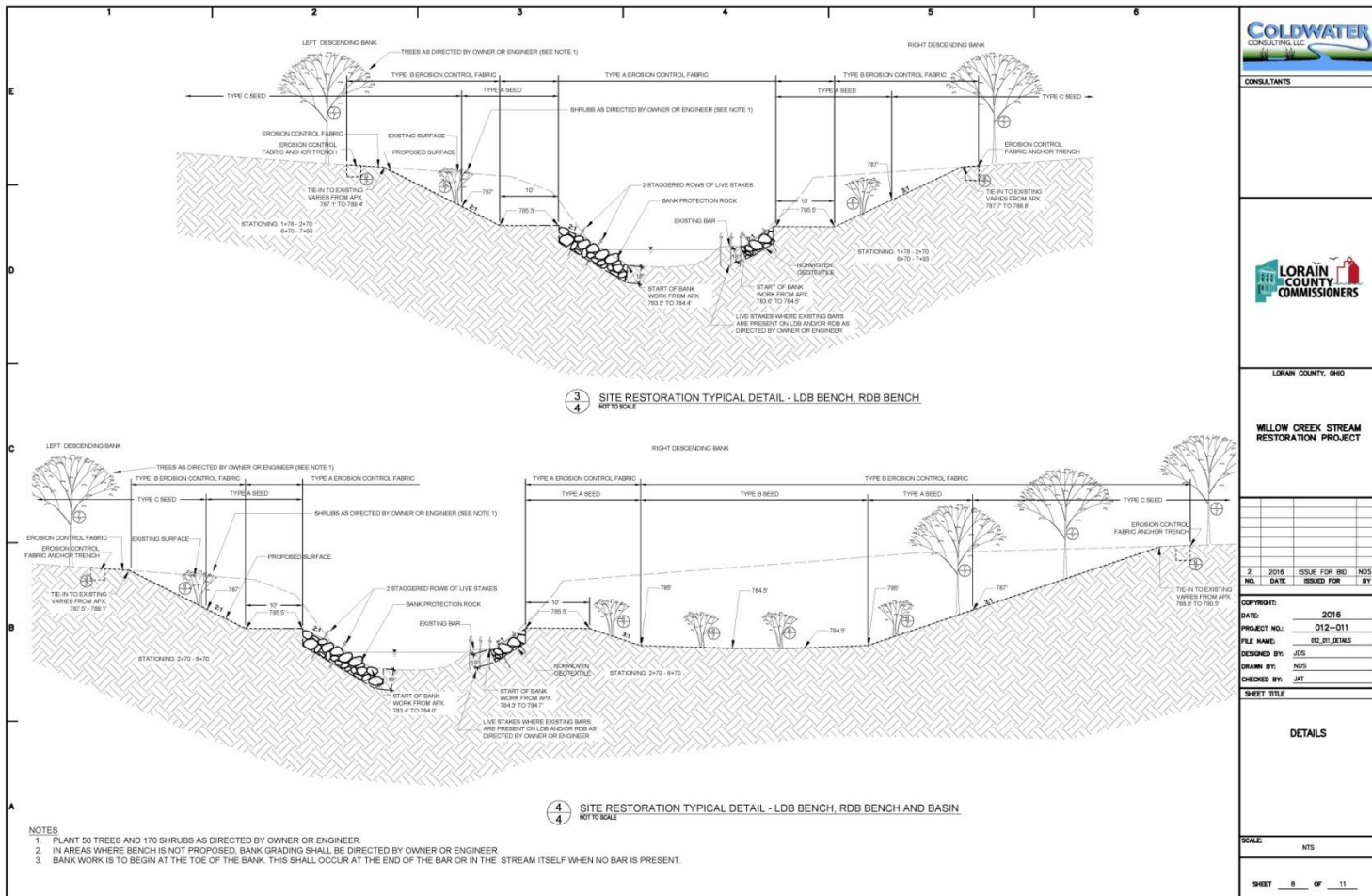




# Construction – Site Plan



# Construction - Details





# Construction

- Slope grading, bank-full bench, rock toe
  - Discourages erosion, provides storage, increases channel stability



# Construction Cont.

- Floodplain excavation – wetland basin
  - Maximizes flood storage, benefits water quality



# Construction Cont.

- Riffle installation
  - Provides channel grade control, creates diverse habitat





# Construction Cont.

- Native plantings
  - Stabilizes soil, reduces runoff, improves water quality, provides habitat, contributes to aesthetics



# Construction Cont.

- Native plantings cont.
  - Live stakes
  - Willows, dogwoods





# Overall

Pre-Construction



Post-Construction



# Wetland Basin

Pre-Construction



Post-Construction



# Riffle Structures

Pre-Construction



Post-Construction



# Vegetation Community

Pre-Construction



Post-Construction



# Wildlife

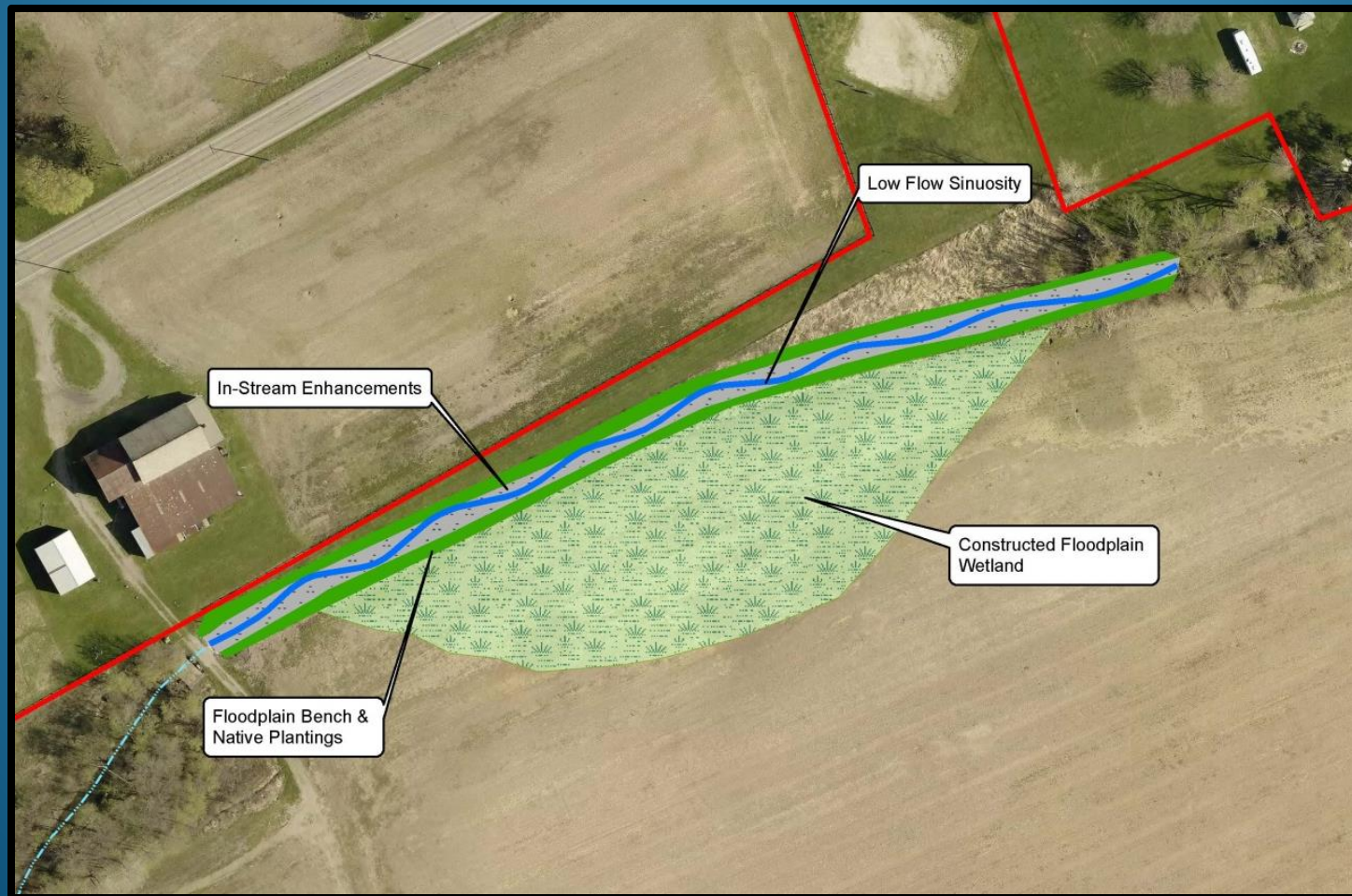
*Crayfish exploring newly created habitat*



*Midland Painted Turtle basking at riffle*



# Future Restoration Efforts Along Fortune Ditch – Margaret Peak Nature Preserve



# Overview

- Additional \$600,000 in funds through an amendment to the current grant
- Project will restore 800 feet of Fortune Ditch and 1.5 acres of riparian wetlands
- Restoring Fortune Ditch with bankfull benches, low flow channel sinuosity, and native riparian plantings



# Pre-Construction Conditions

- Vertical, erosive banks and incised channel disconnected from floodplain
- Absent riparian buffer & in-stream habitat



# Project Goals

- Provide water quality improvements, especially reduced suspended sediments, in the subwatershed and contribute to Beneficial Use Impairments removal in the Black River
- Beneficial Use Impairments to be improved with this project include: 1) Degradation to Benthos; 2) Degradation of Fish and Wildlife Populations; 3) Loss of Fish and Wildlife Habitat; and 4) Aesthetics.

# Questions?

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