

Public Update Meeting Findlay, OH – April 4, 2022



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Agenda

- 1. Hydraulic Improvements Phase I
- 2. Norfolk Southern Bridge Replacement
- 3. Additional Hydraulic Improvements
- 4. Eagle Creek Flood Basin
- 5. Costs, Benefits, Schedule
- 6. Next Steps

Hancock County Flood Risk Reduction Program



Project Overview

Hydraulic Improvements Phase I



Floodplain Benching



Hydraulic Improvements Phase I

2022 Update

Outstanding tasks:

Tree removal Excavation Final Seeding and Grading Bike Path Connection

Rawson / ark

Swale Park

Norfolk Southern Railroad Improvements Overview

NS RR Improvements



- Phase I Floodplain benching to continue upstream to the east
- Railroad Bridge Widening
- Grade adjustments at Cory
 Street and Washington Street

NS RR Improvements









Additional Hydraulic Improvements

Additional Hydraulic Improvements Overview



Additional Hydraulic Improvements

Overview

- Continuation of floodplain benching from NS Railroad Bridge Improvements to the west upstream to the CSX railroad bridge
- 2 in-stream riffle structures
- Bike path ramp to connect the floodplain bench to the pedestrian bridge at Civitan Park
 - City of Findlay has contracted a landscape architecture firm to design the community space on this site

Additional Hydraulic Improvements



Project addresses ~83% of Eagle Creek Watershed

Eagle Creek

(~63 mi.²)

Hye Creek

~28

mi. 2)

Blanchard River

(~242 mi. ²)

USGS Gage

#04189000

Goshen Ty

~346 mi.²)

Project Background Eagle Creek Flood Basin

Project Purpose

- Primary Goal
 - Reduce peak flow rates in Eagle Creek and the Blanchard River during large storm events to reduce water surface elevations to mitigate potential structural, social, and environmental damages
- Secondary Goal
 - Improve water quality by creating wetlands and native habitats / riparian corridors
- Tertiary Goal
 - Provide passive recreation opportunities

Project Components

Eagle Creek Flood Basin

- Dam Embankment
- Principal Spillway
- Auxiliary Spillway
- Exterior Drainage
- Interior Drainage / Land Use Design



Eagle Creek Flood Basin

Project Stats

- Embankment Length
 - ~3.75 miles (19,800 ft.)
- Max. Embankment Height
 ~29 feet
- Average Embankment Height
 ~12.5 feet
- Storage Footprint
 - ~765 acres
- Storage Capacity @ Normal Pool
 - ~7,000 ac-ft
- Max. Principal Spillway Discharge
 - 1,250 cfs



Eagle Creek Flood Basin

Project Benefits

- Dry-reservoir storage basin would detain water during flood events, maintaining a controlled release of discharge back into Eagle Creek through designated spillways.
- Project expected to lower flood levels in downtown Findlay by ~1.2 ft. during a 1% ACE (100-yr) storm event.
- Approx. 1,740 parcels projected to be removed from floodplain



Dam Embankment

Project Components



- Typical Section
 - Earthen Embankment (on-site soil borrow material)
 - Grass slopes / crest
 - 3H:1V side slopes
 - Dam Crest El. 813', 12' wide
 - 15' wide maintenance bench (interior and exterior)
 - Internal Drain below specified elevation
 - Inspection Trench
 - Sheet Pile Cutoff at critical sections

Integrated Spillway Plan View

Project Components

- Integrated Principal / Auxiliary Spillway
 - Located adjacent to Eagle Creek
 - Allows for Fish Passage
 - Reduces Seepage Pathways
 - Smaller Structural Footprint
 - Better Access



Auxiliary Spillway Plan / Elevation

Project Components

- Labyrinth Spillway
 - Safely Passes
 Flow > 100-yr
 flood (up to PMF)
 - Steel Reinforced
 Concrete Wall
 - Crest Elev. 807'
 - Height 13'
 - ~440 LF





Project Components

Exterior Drainage

- Trapezoidal Ditches Convey 25-yr runoff
 - Keep 100-yr runoff away from exterior bench
- SW & NW
 - To Aurand Run Ditch
- N

F

- To Eagle Creek
- •
- To Eagle Creek
 - Dual Drainage
 - Channel /
 stormwater pipe



Project Components

Interior Drainage

- Drainage
 - Graded away from dam to promote positive drainage
 - Localized low spot in NE corner will pond
- Interior Wetlands
 - Currently part of design, outside of H2Ohio Grant



Hydraulic Improvements Phase I

Costs, Benefits, Schedule

- Construction & Engineering \$ 8,079,000
- All costs funded by 1/4% Sales Tax
- Increased Wetland Function & Water Quality
- Fish Passage & Aquatic Habitat
- Enhanced Recreational Opportunities
- Reduced Transportation Impacts
- Mediation for eminent domain case scheduled for April 22
- Construction will be completed 3 months after eminent domain settlement

RAISE Grant

- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
- MWCD was awarded the RAISE Grant for the NS Railroad Bridge in the amount of \$7.1MM (80%) share
- Coordination with the Federal Rail Administration is ongoing



2022 Update

NS RR Improvements

- Design reviews with Norfolk Southern are ongoing
- 90% design to be complete by the end of May
- Permitting
 - 401 and 404 Phase I Hydraulic Improvements permits will be amended to include the NS project area
 - Section 106 Archaeological Phase III Data Recovery is being coordinated with the FRA
- Funding Negotiating with NS to assist with 20% local share
- Anticipate authorization from FRA to begin bidding in the 4th quarter of 2022 – construction in 2023

2022 Update

Additional Hydraulic Improvements

- 100% Design to be completed in April 2022
- Permitting
 - USACE Nationwide Permits have been granted
 - Section 106 Archaeological Phase III data recovery is being coordinated with the SHPO
- Coordination with AEP is ongoing to relocate utilities
- Mussel relocation to be completed summer 2022
- Construction to begin later in 2022
 - Dependent on property acquisition two (2) properties remaining
- Current estimated project cost is \$ 4.9 MM

Eagle Creek Flood Basin

Next Steps – Preliminary Schedule

- Preliminary Design (complete)
 - December 2020 through April 2022
 - Field work, Design Criteria, Data Analysis, Preliminary Design, Interior Concepts, Drawings, Preliminary Design Report, OPCC, Permit Application Submittals
- Permit applications will be submitted in April to Federal & State reviewing agencies – approvals expected by end of 2022
- Property acquisition is ongoing
- Final Design Q3 2022 through Q1 2023
 - Final plans and bidding documents completed by end of March 2023, pending permit approvals
- Construction Q2 or Q3 2023
 - 18 to 24 months for completion
- Construction Completion Anticipated Q3 2025

2022 Update

Eagle Creek Flood Basin

- All costs funded by grants from the State of Ohio
- Grants of \$ 30 million received to date
- Property acquisition (to date) \$ 18,907,000
- Engineering (to date) Stantec \$ 2,646,000
- Current project cost estimate is \$75,000,000
 - Includes a 15% contingency
- Estimated annual maintenance cost is \$ 100,000 \$ 150,000
- Provides improved Water Quality to Eagle Creek
- Provides passive recreation opportunities

Benefits

Full Program of Projects

- Final as-built construction drawings for all projects will be submitted to FEMA to update regulatory flood plain boundary
- Removes 1,740 parcels from FEMA floodplain
- Removes 1,680 acres from the floodplain including 650 agricultural acres
- US 68 & SR 15 will remain open to traffic during flood events