### Closing Ohio's Direct Water Pathways

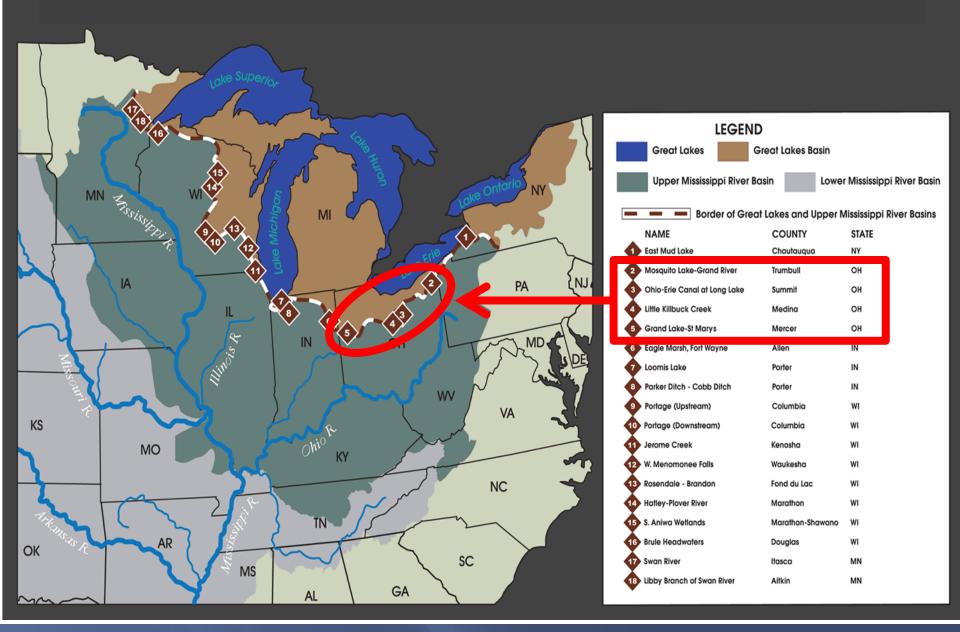
To Conserve and improve Fish and Wildlife resources and their Habitats for sustainable use and appreciation by all





John Navarro
Aquatic Invasive Species Program Administrator

## Pathway - Canals and Waterways



## Rankings

Socoti Socoti Socoti

**#1: Chicago Area Waterway (Illinois)** 

#2: Eagle Marsh (Indiana)

#3: Ohio Erie Canal (Ohio)

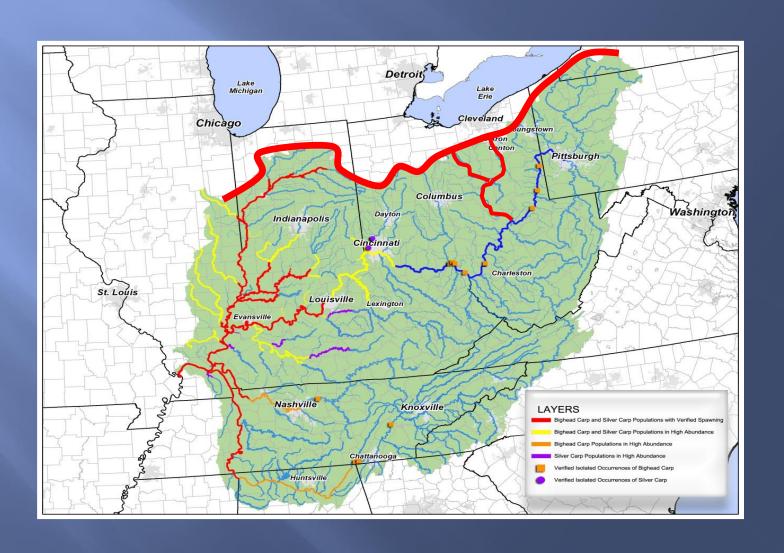
#3: Little Killbuck Creek (Ohio)







## Our Line in the Sand

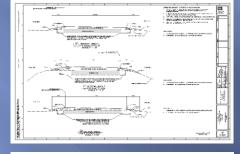




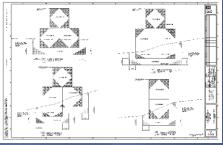
# Low Spots Along the Tow Path



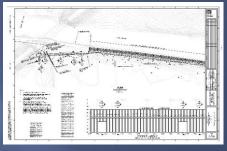
**Topdressing** 



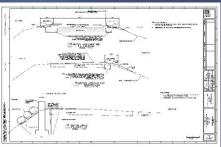
**Gabions** 



Sheetpile



Curb



# Gabions





# Sheetpile





# Curbing





## **Canal Outlet at Wolf Creek**



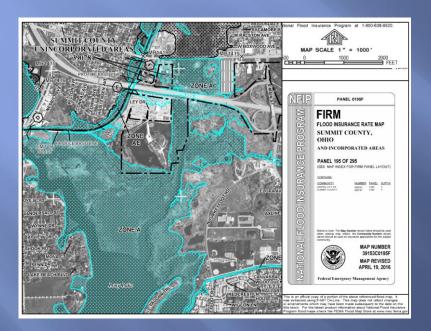


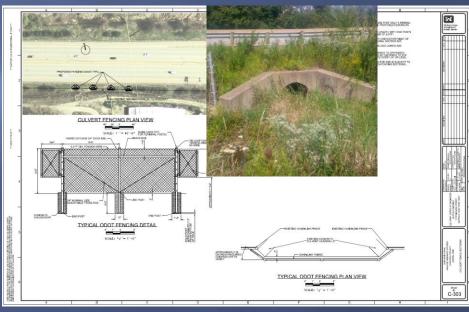
## **Lateral Overflow Weir**





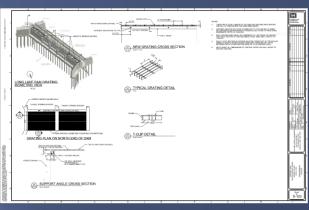
## **Culverts at I-277**

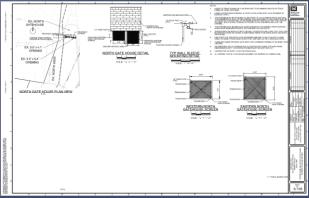




# **Long Lake Measures**







# Long Lake Flood Gates





## **Canal Feeder Gate**





#### Where Do We Go Now?

#### Cost

- USACE 2.4 Million
- Ohio DNR \$115,000

#### Funding Thru FY2018

- USACE Phase I Construction
- Ohio DNR SHPO and O&M

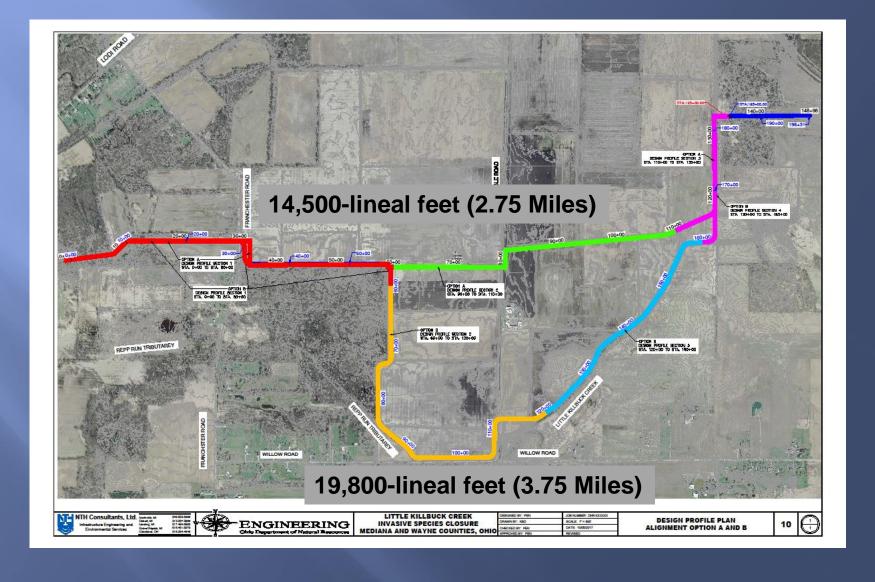
#### Future Funding FY2019

- USACE O&M manual
- Ongoing O&M

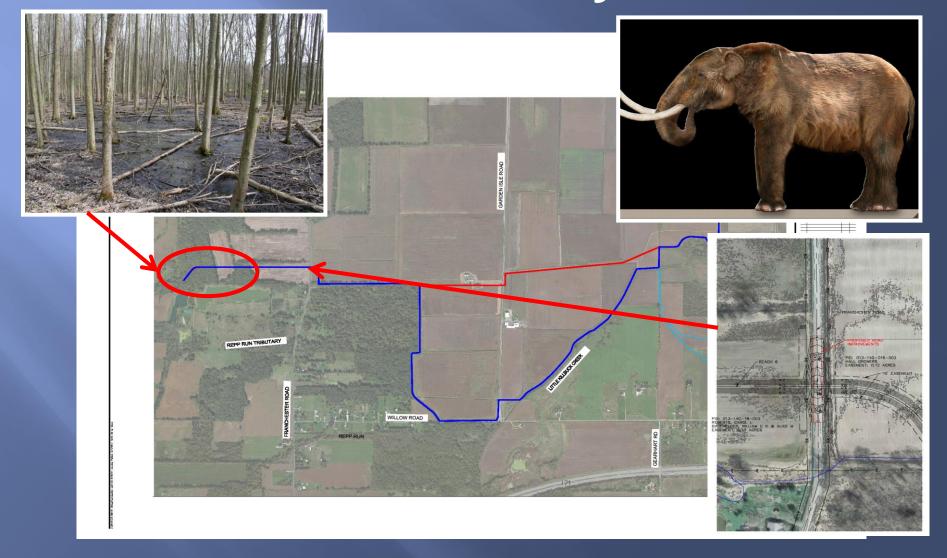
# Little Killbuck Creek



# **Two Proposed Alignments**



# Dike Alignment Wetlands/Roadway/Cultural



# Flooding/Drainage/Irrigation





#### Where Do We Go Now?

#### Cost

- \$4.4 Million Original estimate
- \$12.16 Million Option A
- \$16.04 Million Option B

#### Funding Thru FY2018

- 25 Percent design Study and Report
- Study and Report to USACE
- Determine alignment
- Property negotiations/acquisitions

#### Future Funding FY2019

- Final Design
- Acquire Borrow/Flood Mitigation Sites
- Construction in Stages