What to Know Before You Get in the Water

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Establishing the Study Area

Things to Keep in Mind:

- Construction Access
- Temporary R/W
- May not be the same as field survey limits
- Balance between too little and too much







Field Data Collection

GPS Units:

- Trimble R1 Unit
- □ Mapping Software
- □ Compatible Device

□ <u>Wetlands</u>:

- Soil Auger
- Munsell Soil Chart
- Plant Identification

Bat Habitat:

DBH Tape

□ <u>Stream</u>:

- D-frame Dip net
- Measuring tool
- □ Other specialized

















Streams

Classification

- Primary Headwater Habitat Streams
 - <1 mi² drainage area
- Headwater Habitat Streams
 - □ >1 mi² drainage area

Habitat Evaluation

- Stream characteristics
- Aquatic species habitat



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Ordinary High Water Mark (OHWM)

- Any channel which carries water for at least a minimal period of time and has an ordinary high water mark (OHWM)
- **OHWM** caused by fluctuations in water levels that result in:
 - □ A line impressed on the bank
 - □ Change in soil characteristics
 - □ Lack of vegetation and/or vegetation transition







Wetlands

- Definition:
 - Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions [40 CFR 230.3 9(t)]
 - A wetland **must** possess:
 - Hydric soils
 - □ Indicators of Hydrology
 - □ Hydrophytic vegetation





Wetlands

Hydrology :

Duration of inundation and saturation

Soils:

Must contain hydric indicators

□ Vegetation:

Must have dominance of hydrophytic vegetation







Summer



Spring

Wetland Examples











Ditches

Ditch Definition: Conveyances that possess a constructed defined channel and transports water

- In Ohio, most ditches function to provide drainage from an area (roadway, agricultural field, residential area, etc.)
- Jurisdictional ditch:
 - Possess OHWM (not fully vegetated), or
 - Constructed in a hydric soil unit to drain a wetland at the time of construction
 - Must be a Relatively Permanent Water (RPW)
 - Subject to Clean Water Act regulation
- Non-jurisdictional ditch/conveyance:
 - Do not possess an OHWM (fully vegetated)
 - Not a captured (channelized) stream or constructed to drain a wetland
 - Can act as a non-jurisdictional conveyance for abutting or adjacent wetlands



Ditch Examples











Other Resources

Ponds, Lakes, Reservoirs

- □ Can be jurisdictional
- □ Can host T&E species and/or habitat
- Can also have wetlands associated with them









T&E Species Overview

ODNR NHDB Request

Mussels

- Background
- 2016 Ohio Mussel Survey Protocol
- Survey Effort and Coordination

□ Bat Species

- Indiana bat (*Myotis* sodalis)
- Northern longeared bat (*Myotis* septentrionalis)
- Habitat Documentation











T&E Species Overview





Mussels

□ All native mussels are protected by law in Ohio (OAC 1533.324)

□ Ohio is inhabited by 10 federally listed mussel species:

- Pink mucket
- Rabbitsfoot
- White cat's paw
- Purple cat's paw
- Northern riffleshell
- Rayed bean
- Sheepnose
- Snuffbox
- Fanshell
- Clubshell





Mussels

- □ Additionally, 14 state listed mussel species occur in Ohio
- North America has the greatest diversity of freshwater mussels in the world
- Historically the Midwest has the greatest number of mussels (Ohio, Missouri, Illinois, Indiana, Minnesota, Wisconsin, and Iowa)
- □ 6 Extinct species
- □ 11 Extirpated species







2016 Ohio Mussel Survey Protocol

- Developed by Ohio Department of Natural Resources and U.S. Fish and Wildlife Service (adopted from West Virginia DNR)
- □ First version was released in 2013
- □ Categorizes Ohio rivers/streams into five categories:
 - Unlisted Drainage area >10 square miles
 - Group 1- small streams, federally listed species not expected
 - Group 2- small streams, federally listed species expected
 - Group 3- large rivers, federally listed species not expected
 - Group 4- large rivers, federally listed species expected



Group 4 Example

Muskingum County:

Muskingum River

Other Examples:

Scioto River* Ohio River* Great Miami River*





Group 3 Example

Cuyahoga County:

Cuyahoga River

Other Examples:

Lake Erie Maumee River * Ohio River* Chagrin River*





Group 2 Example

Franklin County:

Big Darby Creek

Other Examples:

Killbuck Creek Olentangy River * Stillwater River* Swan Creek*





Group 1 Example

Delaware County:

Scioto River*

Other Examples:

Old Woman Creek Big Walnut Creek Chagrin River* Mad River*





Unlisted Examples



Madison County:

Bradford Creek Drainage Area = 7.31 square miles

Wood County:

Cedar Creek Drainage Area = 13.4 square miles





Mussel Surveys

- □ Survey season
 - May 1st October 1st
- Reconnaissance survey: used on Group 1 and Unlisted streams with a drainage area >10 square miles to determine presence/absence
 - If live or fresh dead mussels found a survey and relocation required prior to construction

Group 2, 3, and 4 streams require survey and relocation prior to construction

Various survey methods permitted:

- Cells
- Transects
- Phase 1
- Phase 2





Mussel Surveys Special Considerations

- □ Survey season
 - May 1st October 1st
- Highly weather dependent
- □ USFWS coordination (Group 2 and 4 streams)
- □ Intensive survey efforts based on depth, flow, visibility, etc.
- □ Relocations valid for two years, survey data valid for five years







Mussel Surveys













BA & BO Process



Waterway Permitting

What's Needed for Waterway Permit?



- Plans showing impacts
 - after Stage 2 or similar submittal
- Quantities of fill including temporary
- OHWM depicted
- De-watering method
- Good project description



Times are a Changing...

Changes Related to Waterway Permitting



Nationwide Permits expiring in March 2017

Proposed Ohio EPA 401 regulations

 Projects that have stream impacts and would've previously qualified for a NWP now may not be eligible

□ Stream mitigation in-lieu fee



Project Example- OBPP

Ohio Bridge Partnership Program



- Completed ecological services for 64 bridge locations across the state in FY15 and FY16
- All were design-build projects with quick turn arounds
- Also completed mussel surveys at 13 locations





Project Example- Root Bridge

University of Toledo Root Bridge Replacement

- Ecological Resources Coordination
- Section 404 PCN
- Group 3 Mussel Survey
- Cultural Resources Review





Project Example- Old Troy Pike (Fund Swap)

Old Troy Pike Bridge Replacement



- Federal/State Funding Exchange Program
 - No impacts to historic structures or bridges
 - Does not require
 individual 401 permit
 - Does not impact Category 2/3 Wetlands
 - Does not impact Endangered Species
- Western Tonguetied Minnow coordination
- Group 1 Reconnaissance survey



Project Example- FRA-71-0.00

FRA-71-0.00 PID 93496



- Interstate Improvement Project
- Three Bridge Alternatives Developed
- Impacts to National Scenic River
 - Required Formal Consultation with USFWS
 - Coordination with multiple agencies including: ODOT, FHWA, NPS, ODNR, USFWS, Metroparks, OhioEPA, USACE
- New Piers to be located on existing island
 - Temporary in-stream closures only



Questions and Contact Info.

Questions?



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