

Section 401 and Isolated Wetlands Permitting in Ohio

Ric Queen
Division of Surface Water



Session Overview

- Part I: Why this is Important
- Part II: Brief Overview of Laws and Rules
- Part III: Stream and Wetland Assessment Methods
- Part IV: 401/Isolated Wetland Permitting Processes
- Part V: What's New/What's Next

Part I:

Why this is Important

Federal Clean Water Act Goals

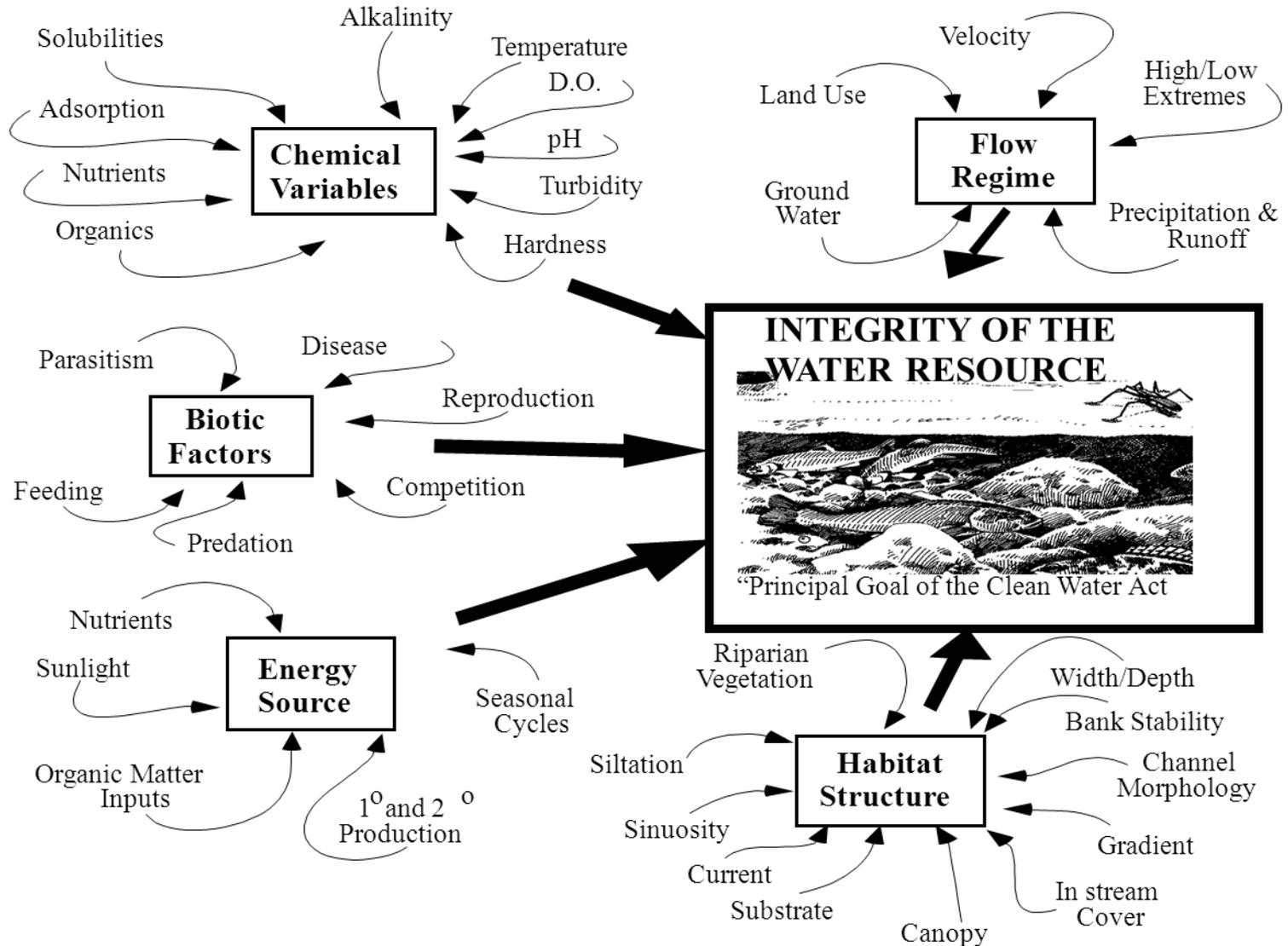
National water quality objective, as contained in the Federal Clean Water Act, is:

"... to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

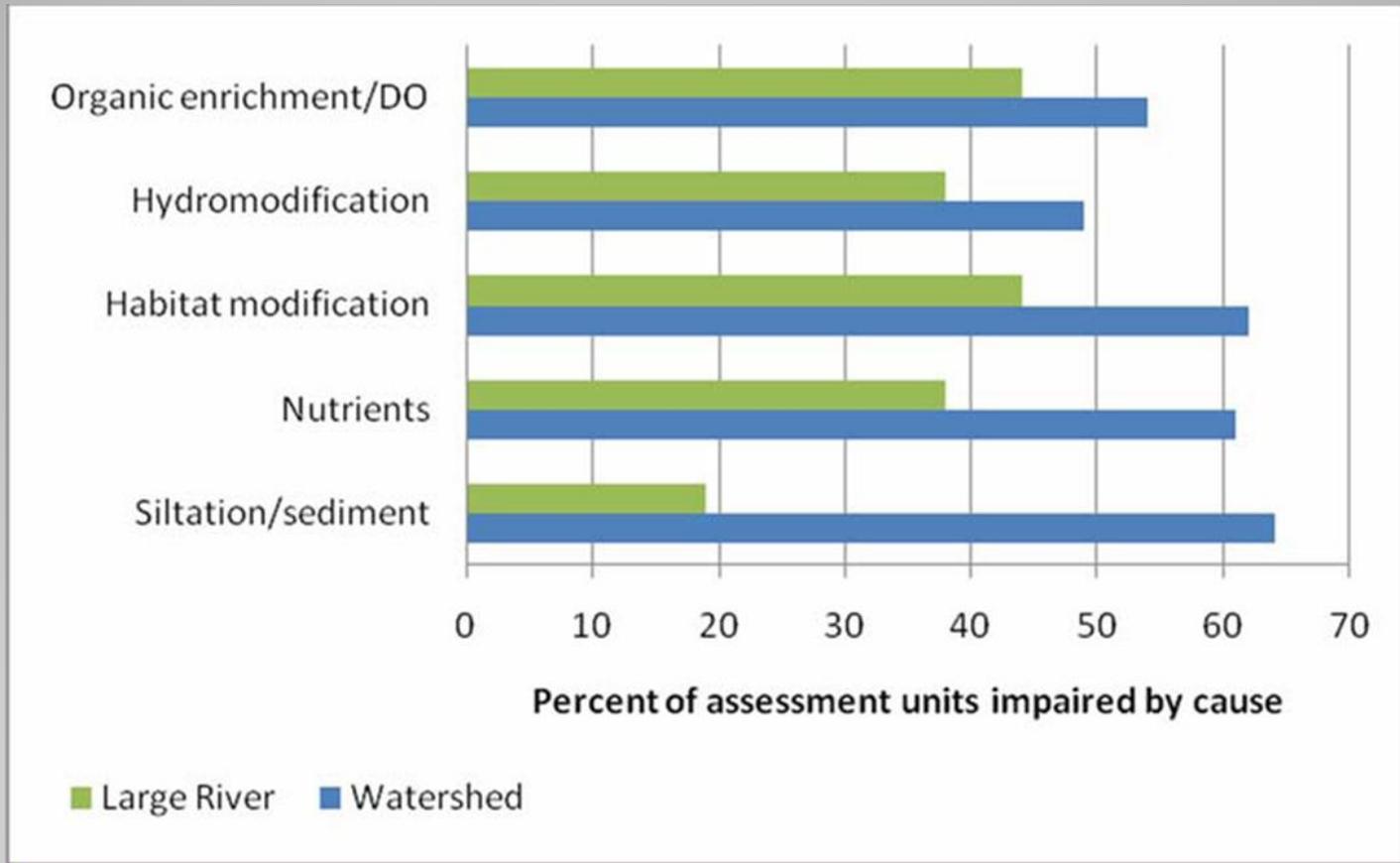
Reference Reaches

- Water Quality criteria is based on reference reaches defined as the “best attainable condition” for a region of the state.
- “Reference condition” does not reflect pristine pre-European settlement.
- Ohio EPA has identified reference reaches in various locations of the state.

Factors that Determine Stream Quality



Five Most Common Causes of Stream Impairment



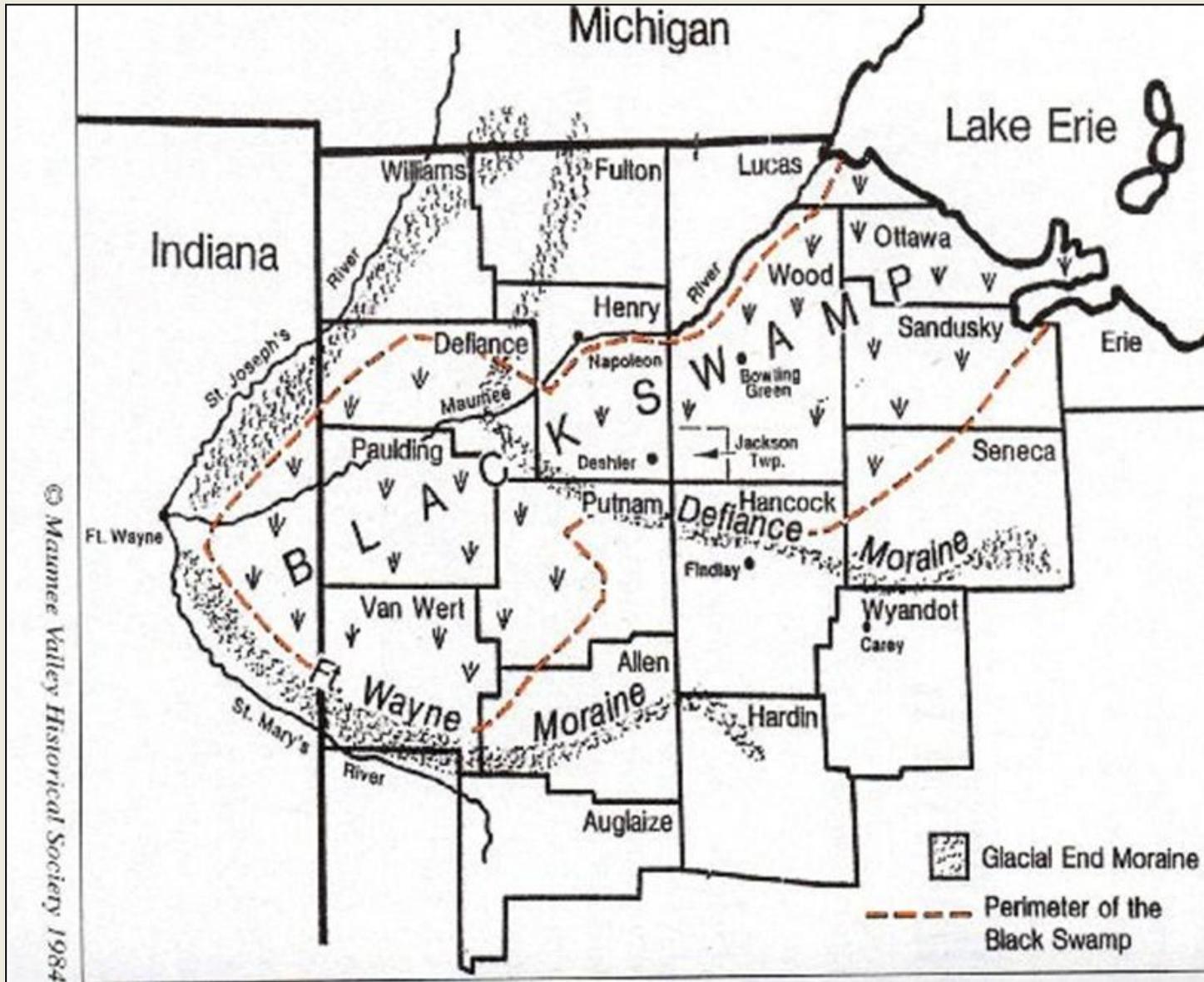
Common Wetland Functions

- Wildlife Nursery & Habitat
- Flood water retention
- Pollutant filtering/treatment/uptake
- Groundwater recharge
- Recreation – hunting
- Education
- Detention/Sediment Control

Wetlands Loss in Ohio

- 90% loss of wetlands in Ohio since 1700s
- 5,000,000 acres to approximately 482,000 acres remaining today
- Most loss occurred in the Black Swamp in NW Ohio for agricultural purposes

Great Black Swamp



Part II:

Federal and State Statutes and Regulations

Federal and State Law

- Federal Law – Clean Water Act (CWA) Sections 404 and 401
- Ohio Revised Code 6111 (for both wetlands regulated under the CWA and isolated wetlands regulated only under state law)

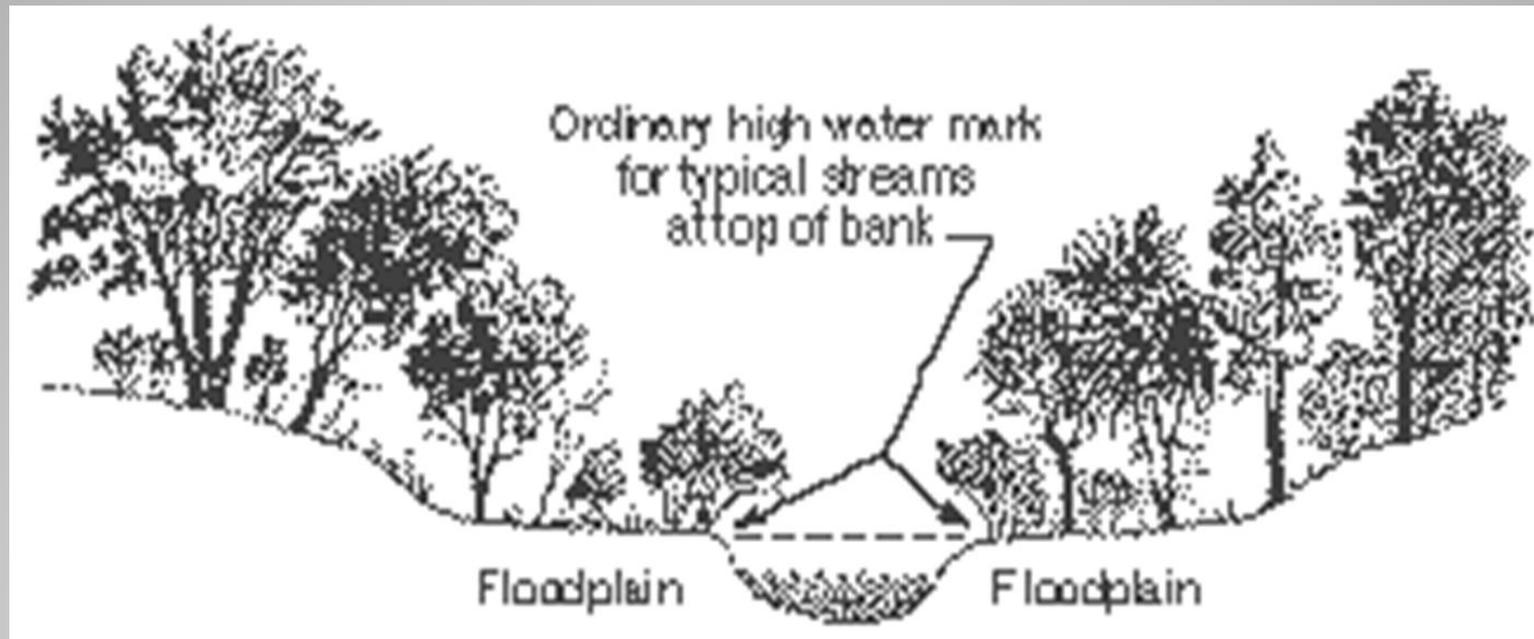
Federal Clean Water Act

- **CWA Section 404 – US Army Corps of Engineers**
 - Issue jurisdictional determinations to determine water regulated under the CWA
 - Conduct 21 point general public interest review including streams, wetlands, floodplains, historic properties, navigation, recreation, food and fiber production, shore line erosion.....
- **CWA Section 401 – State Water Quality Certification Agencies (in Ohio – Ohio EPA)**
 - Certify that proposed action does not interfere with state water quality standards

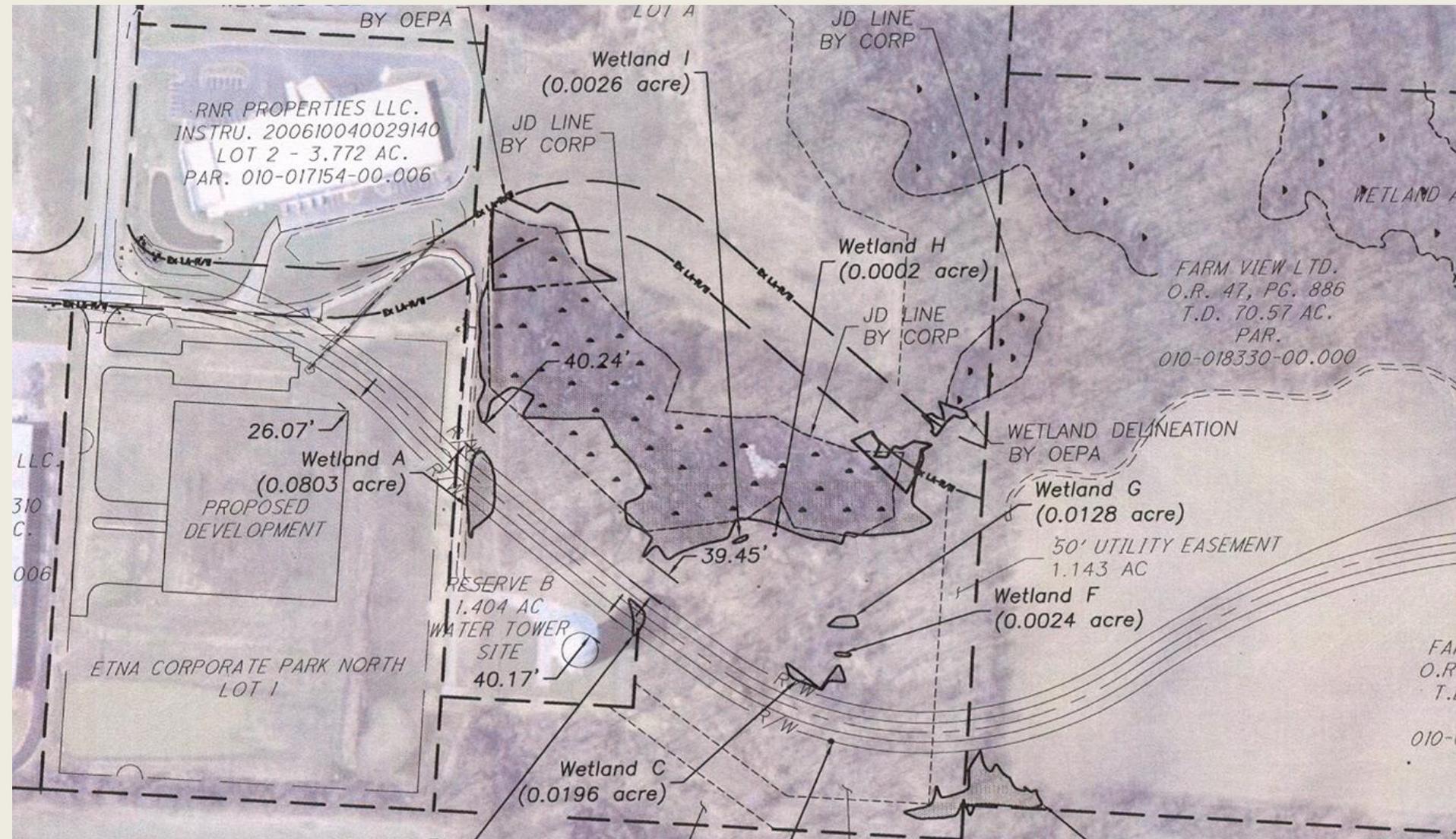
Regulated Activities

- 404/401 permits required for activities involving the discharge of dredged or fill material into waters of the US below the Ordinary High Water mark (OHWM)

Ordinary High Water Mark – Streams



Ordinary High Water Mark – Wetlands (see wetland boundary)



Isolated Wetlands Not Regulated Under the Federal Clean Water Act

- Solid Waste Authority of Northern Cook County
 - 2001 (SWANCC)
 - Wetlands that are “isolated” from navigable waters are not regulated under the Federal CWA, and cannot be considered jurisdictional based solely on the presence of migratory birds
 - Isolated wetlands are regulated under state law

Significant Legal Cases

- January 2001 – US Supreme Court ruling in the Solid Waste Agency of North Cook County (SWANCC) case removes “isolated” wetlands from jurisdiction under the CWA
- July 2001 - Governor Taft signs HB 231 into law granting Ohio EPA authority to regulate activities in “isolated” wetlands

Rapanos

- 2006 US Supreme Court ruling in response to legal challenge regarding federal jurisdiction to regulate certain streams
- US Army Corps of Engineers develops a new procedure to determine jurisdictional status of streams and wetlands

Types of Federal Permits

- **General Permits** (for projects with minimal impacts)
 - Nationwide permits (activity based)
 - Letter of Permission
 - Regional Permits
- **Individual Permits** (requires a rigorous analysis)
 - Section 404 permit (USACE)
 - Section 401 WQC (Ohio EPA)

Ohio EPA 401 WQC for the Nationwide Permits

- **Wetlands**

- Must be under ½ acres of Cat 1 or 2 wetlands
- No impacts to Cat 3 wetlands authorized

- **Streams**

- Generally, must be < 300 linear feet of total impact
- No impacts to EWH, CWH, SSH, National and/or State Wild or Scenic Rivers, Superior High Quality Waters, Outstanding National Resource Water or Outstanding State Water

See 3/30/13 WQC of Nationwide Permit for exceptions

Permitting Scenarios - CWA

- If less than 0.1 acres and no Cat 3 wetlands – then no notification
- Activity could qualify for coverage under NWPs for both 404 and 401 WQC
- Activity could qualify for coverage under NWP for 404 but require individual 401 WQC
- Activity could require both individual 404 permit and 401 WQC

List of Key State Statutes

- 6111.02 – .029 Isolated Wetlands
- 6111.12 - Antidegradation
- 6111.3 – Application for water quality certification

List of Key Rules

- OAC 3745-1 – Water Quality Standards
- OAC 3745-1- 50-54: Wetland Antidegradation
- OAC 3745-32: 401 Water Quality Certification

Part III:

Stream and Wetland Assessment Tools

Wetland Definition

“Those areas that are inundated or saturated by surface or ground water at a frequency and duration that are sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

In order for an area to be a legally defined wetland (jurisdictional and isolated) it must meet all three of the following criteria:

- > 50% hydrophytic vegetation
- Have hydric soils
- Presence, or indicators, of hydrology

Wetland Assessment Tools

- Ohio Rapid Assessment Method (ORAM)
 - Measures “intactness” of a wetland
- Vegetative Index of Biotic Integrity (VIBI)
 - Based on plant species diversity
- Amphibian Index of Biotic Integrity (AmphIBI)
 - Based on amphibian species

**High correlation between ORAM, VIBI and AmphIBI scores

Vegetative Index of Biotic Integrity (VIBI)

- Intensive survey of all plant species and communities within a wetland
- Must be conducted in growing season June 15- September 15 in order to identify plants

Amphibian Index of Biotic Integrity (AmphIBI)

- Assess amphibian populations residing within a wetland

Wetland Categorization

ORAM score in parenthesis

- Category 1: (0-29) lowest quality
- Gray Zone: (30-34.9)
- Modified Category 2: (35-44.9) disturbed Cat 2
- Category 2: (45-59.9) medium quality, most common
- Gray Zone: (60-64.9)
- Category 3: (65-100) high quality, not as frequent
- Gray zone: assume next highest category unless determined otherwise thru VIBI or AIBI

Category 1 Wetland



Category 2 Wetland



Category 3 Wetland



Stream Classification

- Stream Use Designations listed in the Water Quality Standards
- Exceptional Warmwater Habitat (EWH) - < 10% of all streams in Ohio
- Warmwater Habitat (WWH) – most common
- Modified WWH (affected by AMD, ditch maintenance)
- Limited Resource Water – degraded
- Coldwater Habitat (CWH) – waters containing species adapted to cooler temperatures
- Season Salmonid Habitat (SSH) – waters containing passage of trout from October to May and are large enough to support recreational fishing

Stream Assessment Tools

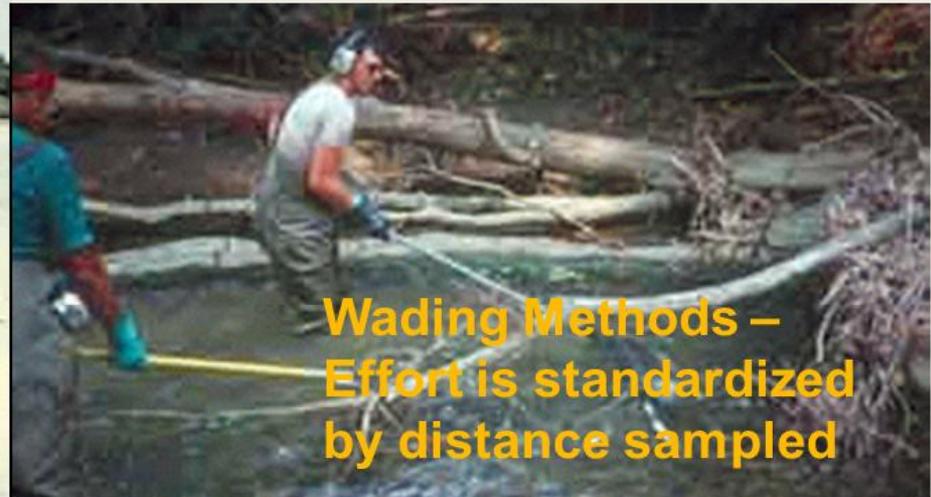
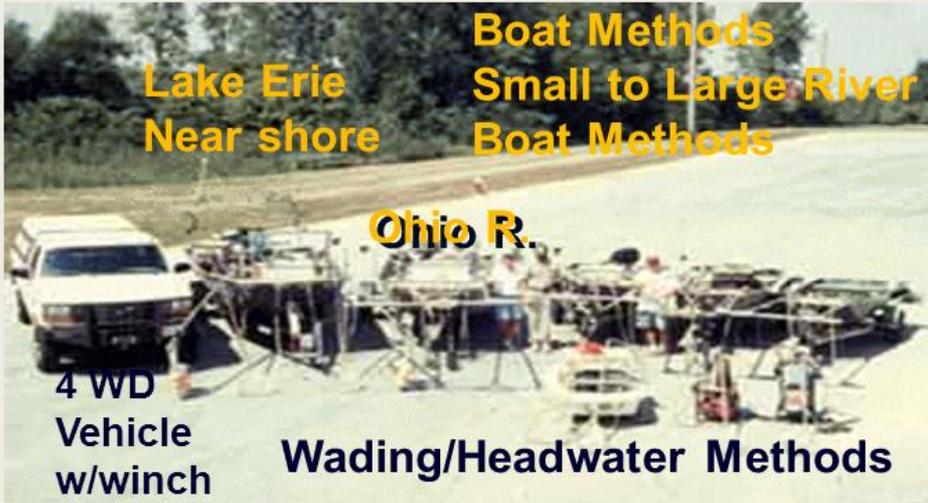
- Undesignated streams require a use attainability analysis (UAA) which may include one or all of the following:
 - Qualitative Habitat Evaluation Index (QHEI)
 - Describes potential to support fish based on habitat
 - Index of Biotic Integrity (IBI)
 - Evaluates fish populations
 - Invertebrate Community Index (ICI)
 - Evaluates benthic macroinvertebrates

Fish Sampling



Fish Sampling

Ohio EPA Fish Assemblage Methods: Field Procedures

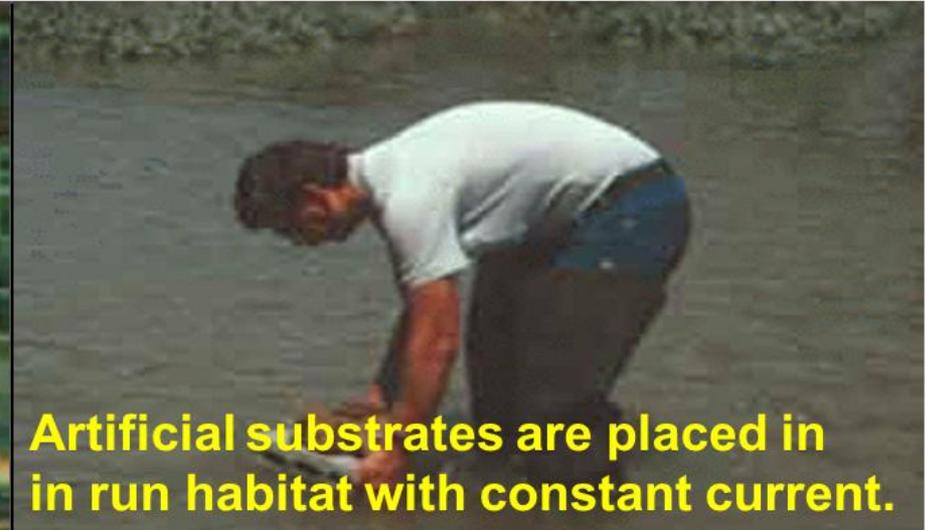


Macroinvertebrate Sampling

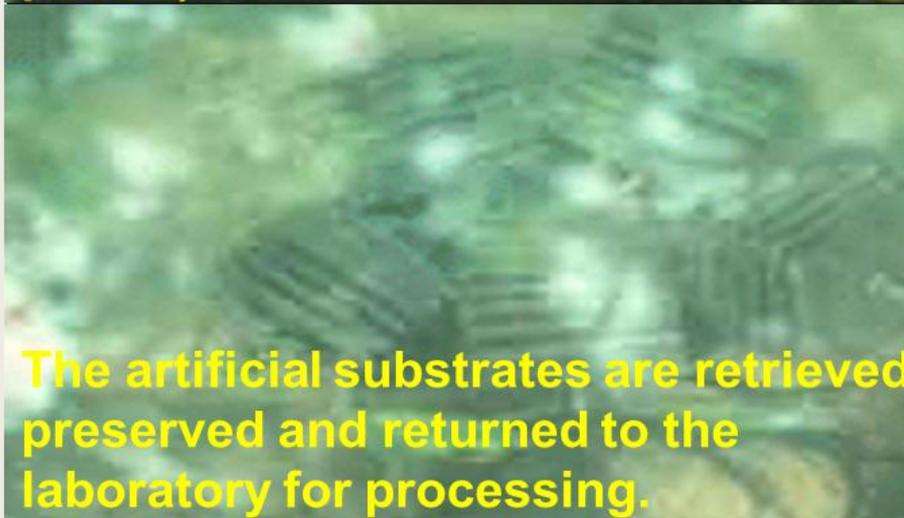
Ohio EPA Macroinvertebrate Methods: Field Procedures



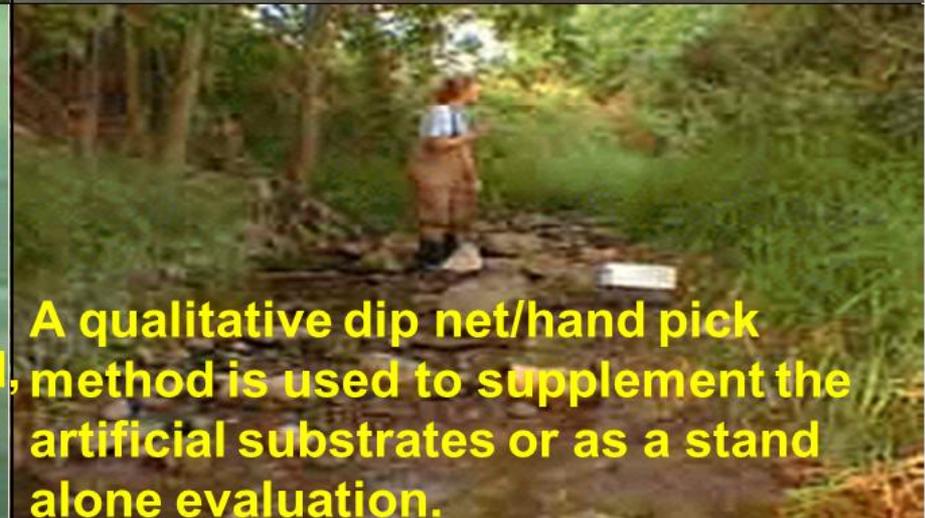
Artificial substrates are set for a six-week exposure (July-Sept. index period)



Artificial substrates are placed in in run habitat with constant current.



The artificial substrates are retrieved, preserved and returned to the laboratory for processing.



A qualitative dip net/hand pick method is used to supplement the artificial substrates or as a stand alone evaluation.

EWH, WWH, MWH



Headwater Habitat Streams <1 Sq mile

- Ephemeral flow
 - Little or no biota, process nutrients, store flood water, source of organic material
- Seasonal flow regime
 - Support amphibians and aquatic insects
- Permanent cold water flow regime
 - Support cool water adapted amphibians and aquatic insects

Ephemeral Stream (Low Quality)



Intermittent Stream (Moderate Quality)



Perennial Coldwater Stream (High Quality)



Cautionary Note – Biology Trumps Habitat Spring Fed CWH Stream Shown Below



Part IV:

The Individual 401 Water Quality Certification and Isolated Wetlands Permit Review Processes

Scope of 401/Isolated Wetlands Reviews

- Housing, power plants, roads, industrial sites, shopping malls, warehouses, landfills, fleeting facilities, power lines and gas lines, sewers, coal mining, subdivisions, etc...
- Anything built in stream or wetlands below the OHWM

401 Water Quality Certification

Major Steps

- Pre-application coordination – not required but usually helpful
- Submit 401 application to Ohio EPA
 - Requires jurisdictional determination and Corps public notice
- 15 day Completeness Review of application
- Once complete - Public Notice and Comment (30 days)
- Site visit as necessary (>90 % of sites require a site visit)
- Public Hearing (if requested or deemed necessary by Ohio EPA - 45 days)
- Prepare Response to Comments if necessary
- Act on application for WQC
- Post certification follow-up (Compliance and mitigation)

401 Water Quality Certification

Major Considerations

- Ohio EPA is *neither* for or against a project (our decision is based on water quality impacts)
- Project popularity is not a factor in our decision
- Ohio EPA is not a land use planning agency and doesn't get involved in local zoning issues
- Use of labor/non-labor workers is not considered

401 Water Quality Certification Major Considerations

- What is the quality of streams and wetlands?
- What is the nature/extent of the proposed impacts?
- Are there direct/indirect impacts?
- Have impacts been avoided or minimized?
- What is the justification for proposed impacts?
- What is the proposed mitigation?

Antidegradation Review

Allows the director to authorize a lowering of water quality after:

- an alternatives analysis
- intergovernmental review
- public involvement
- *And* director determines the project will not result in violation of aquatic life use

Wetlands Criteria

- No impacts to Category 3 wetlands may be authorized unless the applicant demonstrates the project satisfies a “public need”
 - This very rarely can be demonstrated.

Antidegradation Review Alternative Analysis

- 1) Preferred Alternative – greatest impact
- 2) Minimal Degradation Alternative – reduced impacts from preferred alternative (may offer more than one min-deg alternative)
- 3) Non-degradation Alternative – no impact, required for all projects not water dependent
- 4) Mitigative technique – to offset unavoidable impacts

Alternatives Analysis



- Example Preferred Alternative

Alternatives Analysis



- Example Minimal Deg. Alternative

Alternatives Analysis



- Example Non-Deg Alternative

Intergovernmental Review

- A copy of the 401 WQC application is shared with the Ohio Department of Natural Resources, the US Fish and Wildlife Service, and Ohio EPA, Division of Drinking and Ground Water

Public Participation

- An announcement is published in the Legal Notices in the newspaper with the widest circulation in the county in which the project is located.
- Copies of the public notice sent to established mailing lists for a county or region.
- Public has thirty days to submit comments from day the public notice appears in the newspaper.
- Public may request a formal public hearing

Mitigation

- Can only be considered after determination that impacts are allowable
- Mitigation cannot be used to justify impacts
- If impacts are too severe, no amount of mitigation can be used to allow the impacts

Antidegradation Review Wetland Mitigation

- Mitigation Techniques
 - Mitigation Banks
 - Approved In-Lieu Fee Program
 - On-Site (on the property or within one mile from the site in the same watershed)
 - Off-Site not at a bank (greater than one mile from the site)
- Monitoring for at least 5 years (10 years for forested mitigation wetlands)
- Require mitigation wetlands be of equal or higher quality than impacted wetlands

Antidegradation Review Stream Mitigation

- Banks or In-Lieu Fee
- Consider on-site restoration or relocation
- Off-site 1.5:1 Mitigation Ratio
 - Restoration
 - Preservation

401 Water Quality Certification

Possible Outcomes of 401 Review

- Project approved as-is (any alternative presented in the application)
- Project approved with modifications
- Project denied
- Project withdrawn

Isolated Wetlands



Isolated Wetlands

3 levels of review for isolated wetlands

Level 1 (GP)	Level 2	Level 3
<= 1/2 acre of CAT 1 or 2 wetlands	>1/2 acre of CAT1 wetlands or	>3 acres of CAT 2 wetlands or
	>1/2 and <= 3 acres of CAT 2 wetlands	any CAT 3 wetlands
30 day review	90 day review	180 day review

Level 1 Review

- Requires a Pre-Activity Notification (PAN)
- Still requires JD from the Corps
- Automatically approved with in 30 days
- Must submit level 2 application if notified that project does not qualify for Level 1
- Applicant can mitigate at a bank without objection of the Director

Level 2 Review

- Requires PAN/ JD letter from the Corps
- Requires an alternatives analysis and avoidance of high quality wetlands
- Review within 90 days

Level 3 Review

- Essentially identical to an individual 401 review under Antidegradation Rules
- Review within 180 days

Part V

What's New / What's Next

401 is constantly evolving

- 1996 Antidegradation Rule revisions
- 1998 Wetland Antidegradation
- 2001 SWANCC Ruling– isolated wetlands
- 2005 Budget Bill and Process Revisions
- 2006 Rapanos Ruling
- 2008 Corps/USEPA Wetland Mitigation Rule

401 is constantly evolving

- Current Stream/Wetland Rule Workgroups
- Discussion with the AG community regarding ditch maintenance
- Cumulative Impacts
- Seek better integration with storm water, TMDLs

Major Program Development Initiative Underway

- Revised 401 application form and guidance document
- Possible electronic application form
- Tiered reviews
- Technical Review Criteria
- External Training

How can you expedite the review

- Submit complete application in proper format
- Submit complete, accurate stream and wetland assessments during proper season
- Submit meaningful, implementable alternatives analyses
- Submit appropriate mitigation plans in proper format
- Immediately notify agency of changes to design

My Contact Information

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Questions?