

Water Quality Certification Program

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Presentation Overview

- Section 404 and 401 of the Clean Water Act.
- Water Quality Certification Program.
- Application process
- Completing the application

Clean Water Act

- Section 404 of the Clean Water Act.
 - Establishes a permitting program to discharge dredged or fill material into Waters of the United States
 - Implemented by the United States Army Corps of Engineers.

Clean Water Act

- Section 401 of the Clean Water Act
 - Requires a Water Quality Certification from the state before a Section 404 permit can be issued.
 - Certifies the proposed fill activity will not violate the States water quality standards and that compensatory mitigation will offset impacts.

Section 401 Continued

- Section 401 of the Clean Water Act.
 - Water Quality Certification conditions become a part of the Section 404 permit.
 - If Section 401 Water Quality Certification is denied by the state the Army Corps must deny without prejudice.

Section 404/401 linked

- Only the Army Corps of Engineers can determine what is a water of the U.S.
- Only the Army Corps of Engineers can determine what activities will trigger a permit.
- If a Water Quality Certification is required from IDEM the Corps must wait.

Permit Types

- Nationwide Permit 21 Coal Mining
 - Approved by IDEM with no conditions.
- Nationwide Permit E Remining
 - Agency Decision will be made in January or February.
- Individual Section 404 Permit
 - Requires an Individual Section 401.

Regulatory Oversight

- Federal Government
 - United States Army Corps of Engineers.
 - United States Environmental Protection Agency (EPA).
- State Government
 - Indiana Department of Environmental Management.

Waters of the United States

- These waters include all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce and their tributaries.
- The definition generally includes lakes, rivers, streams, and adjacent wetlands.
- Complete Definition 33 CFR 328

Regulated Activities

- The discharge of dredged or fill material into wetlands, streams, or impounded streams.
- Mechanical clearing of wetlands.
- Mechanical clearing of streams below the ordinary high water mark.
- Stream relocations

Water Quality Certification Program

- Waters of the United States determination and verification.
- Avoidance, minimization, and compensatory mitigation.
- Application submittal.

Determination and Verification

- Hire a consultant to perform a wetland delineation or other waters determination.
 - Must be in accordance with the 1987 Army Corps of Engineers Wetland Delineation Manual.
- Submit the delineation to the Army Corps of Engineers for verification and Jurisdictional determination.

Avoidance, Minimization, and Compensatory Mitigation

■ Avoidance

- Design your project to avoid all impacts to Waters of the United States.

■ Minimization

- Design your project to minimize impacts if they are unavoidable.

■ Compensatory mitigation

- Provide mitigation for unavoidable impacts to offset impacts to water quality.

Application Submittal

- Application for authorization to discharge dredged or fill material to isolated wetlands and/or waters of the state. State Form 51821.
 - Must include all information identified in the directions.
 - Must include compensatory mitigation if required.
 - Review process generally takes 45-90 days from receipt of a complete app.

Submittal Format

- Submit a hard copy of the signed application including the water resources worksheet.
- Submit a hard copy of the mitigation plan.
- Submit all supporting documents on two disks.

Application Process

- Review application to ensure all information is included.
 - If the application is missing information, a letter of deficiency will be sent to applicant.
- Once an application is complete the project is put on public notice.
 - Notice is mailed to adjoining property owners and anyone requesting the notice.

Application Process

- Army Corps of Engineers will put project on public notice if it requires a individual 404 permit.
- The Corps public notice will serve as public notice under Section 404/401.
- IDEM Section 401 Water Quality Certification is not considered complete until receipt of the Joint Public Notice.

Application Process Continued

- Site visit is conducted to look at proposed impacts.
- Application is reviewed for compliance with the states water quality standards.
 - 327-IAC-2-1-1.5 The goal of the state is to restore and maintain the chemical, physical, and biological integrity of waters of the state.

Water Quality Standards Continued

- 327-IAC-2-1-2 For all waters of the state, existing and beneficial use shall be maintained and protected.
- 327-IAC-2-1-6 All waters shall meet the minimum condition of being free from substances, materials, floating debris, oil, or scum attributed to discharges that become injurious to aquatic life, other plants, animals, or humans.

Agency Decision

- Once the project is off public notice and no issues have been raised, the agency will make a decision.
- Denial of Water Quality Certification.
 - Army Corps of Engineers must deny section 404 permit.
 - Agency appeals process will be outlined in the denial letter.

Agency Decision Continued

- Issuance of Section 401 Water Quality Certification.
 - Must comply with all conditions of the certification.
 - Authorization is only granted for the project described in the application. If your project has changed you must modify your certification.
 - Modifications may not require public notice.

Completing the application

- All Sections of the application must be completed.
- This is a state application form. Do not reference a DA 404 application Form when completing a section.
- Fill out the entire water resources worksheet. Even for isolated wetlands.

Completing the Application

- In accordance with IC 13-18-22-1(b)(2) a permit is not required for isolated wetland activities at a surface coal mine with a DNR Permit.
- Must include the isolated wetlands in the application form even though a permit is not required.

Break

- 10 Minutes

Compensatory Mitigation

- All fill violates the states water quality standards.
- Compensatory mitigation allows impacts to occur that would significantly degrade water quality.
- Compensatory mitigation ratios are higher due to complexities of recreating aquatic resources.

Compensatory Mitigation

- Compensatory mitigation plans should follow the Louisville District Corps of Engineers Mitigation Guidelines dated September 22, 2004.
- Must recreate the aquatic resources impacted by the project.
- Mitigation plan should include planting plans, success criteria, and monitoring and maintenance plan.

Planting Plans

- Select herbaceous seed mixes that are native to Indiana and that are appropriate for the intended use.
- Select native tree and shrub species that are native to Indiana and appropriate for the intended use.
- Plans should include seeding and tree planting rates.

Success Criteria

- Compensatory mitigation criteria should be performance based.
- Herbaceous plantings should have 70 percent vegetated cover. Cover decreases for shallow and deep emergent.
- Forested and scrub shrub wetlands are 70 percent vegetative cover with a stem density around 200 live stems/acre.

Monitoring and Maintenance

- Mitigation plan should include procedures for documenting the success of the mitigation site and any necessary maintenance.
- Mitigation sites should have permanent sampling and photographic stations for documenting yearly success.

Monitoring Reports

- Monitoring reports should be submitted yearly to IDEM/Corps to document success.
- Monitoring is for a minimum of 5 years and ends when success criteria established in the permits have been met.
- Reports are due by January 30 for the previous year.

Wetlands

- Those areas that are inundated or saturated by surface or ground water 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.

3 Parameters

■ Hydrology

- Area is inundated or saturated to the surface for at least 5% of the growing season in most years.

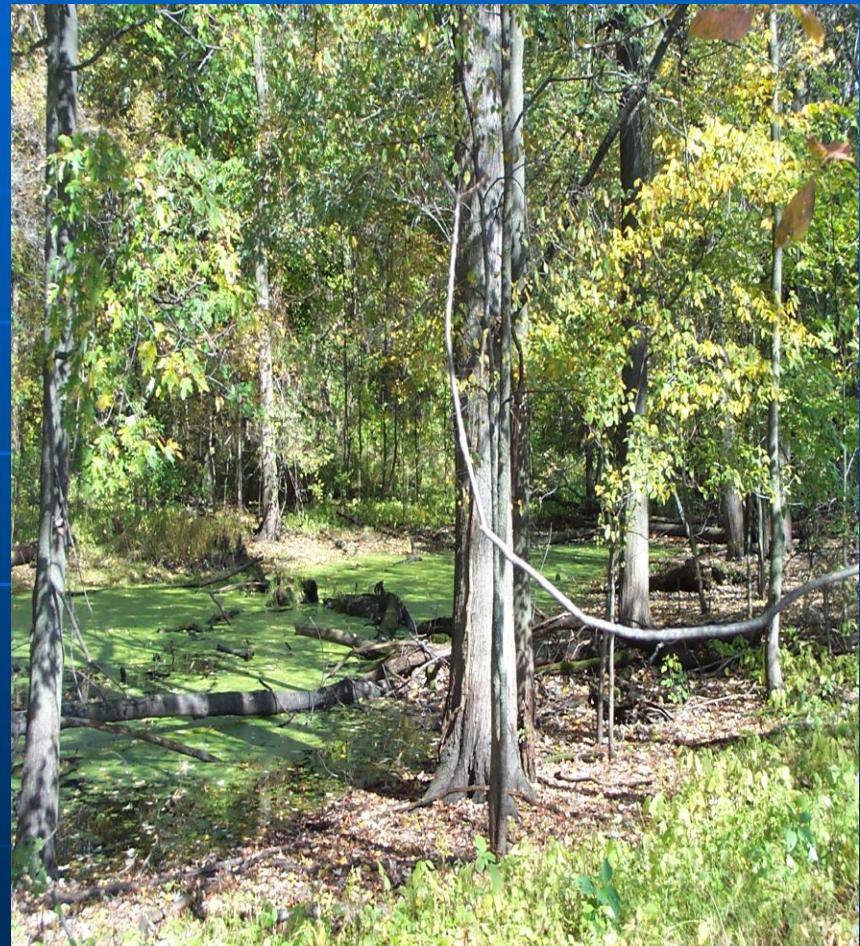
■ Hydric soils

- Formed under saturated or inundated conditions.

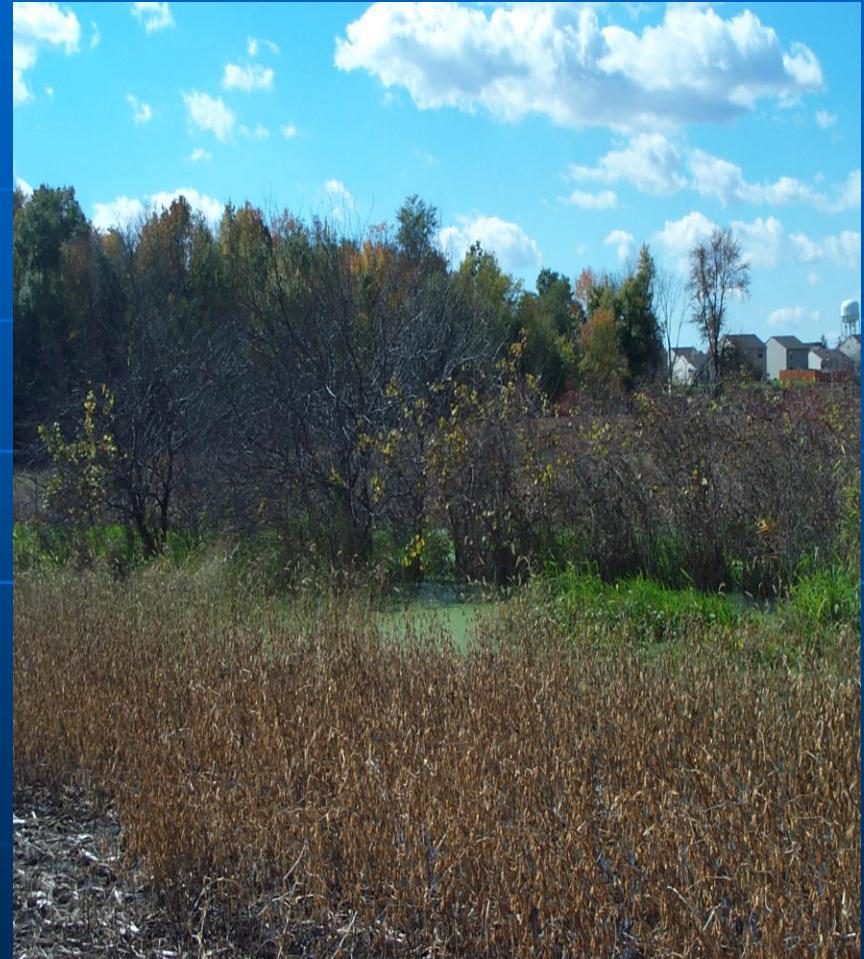
■ Hydrophytic vegetation

- Dominance of plants adapted to grow in wet conditions.

Forested Wetlands



Scrub Shrub Wetlands



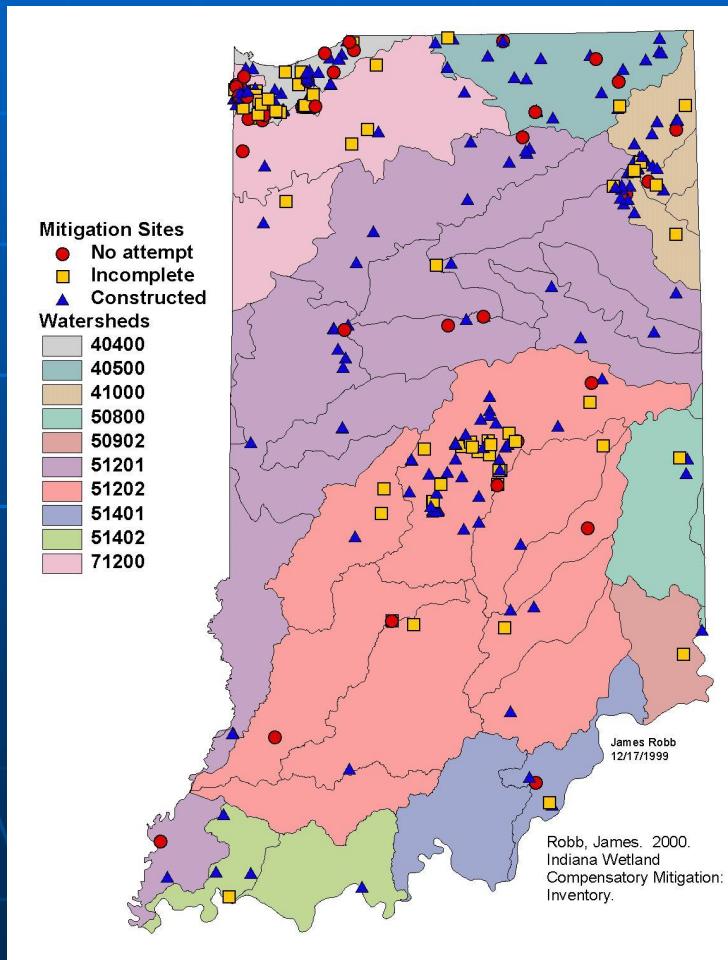
Emergent Wetlands



Wetland Compensatory Mitigation Ratios

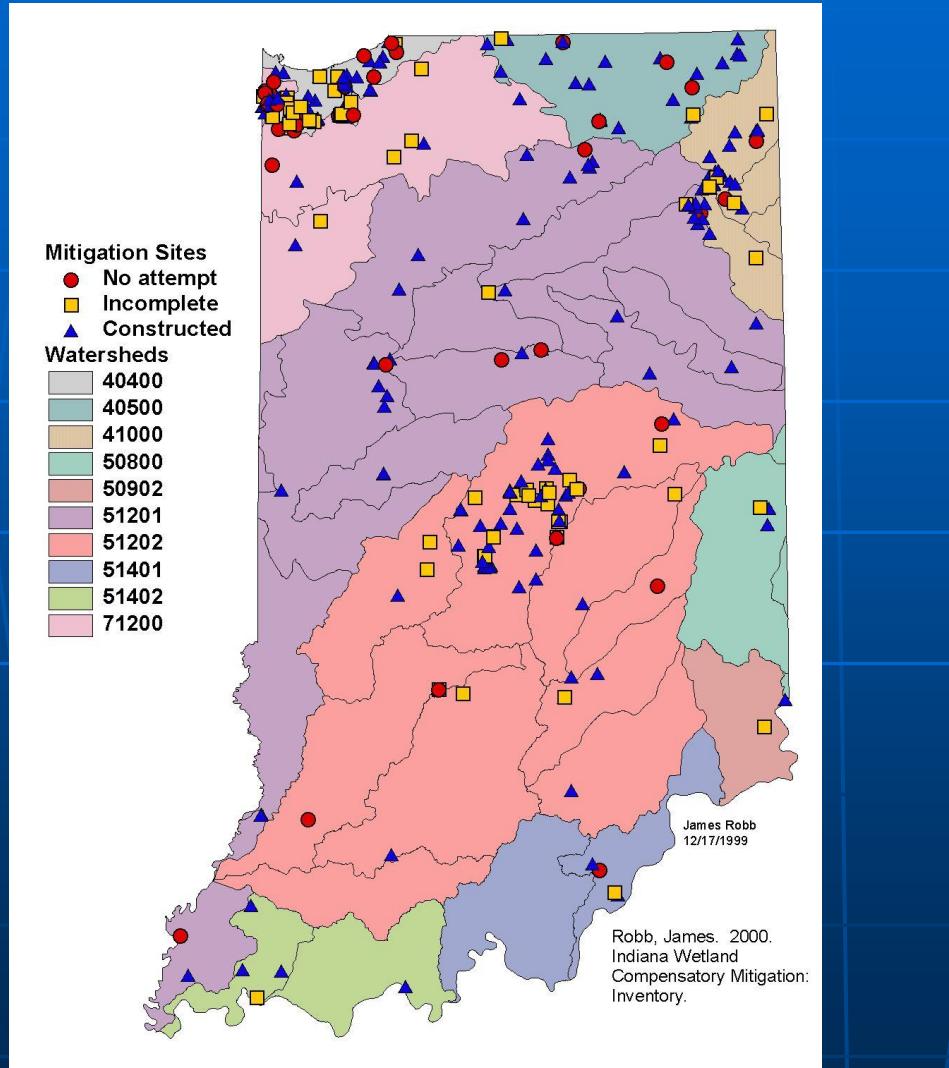
- The area of compensation required is often larger than the area of wetland loss
 - Herbaceous = 2:1
 - Shrub = 3:1
 - Forested = 4:1
 - Farmed wetland = 1:1
- **Why?** To overcome the risk of failure and temporal loss of function

Mitigation Inventory

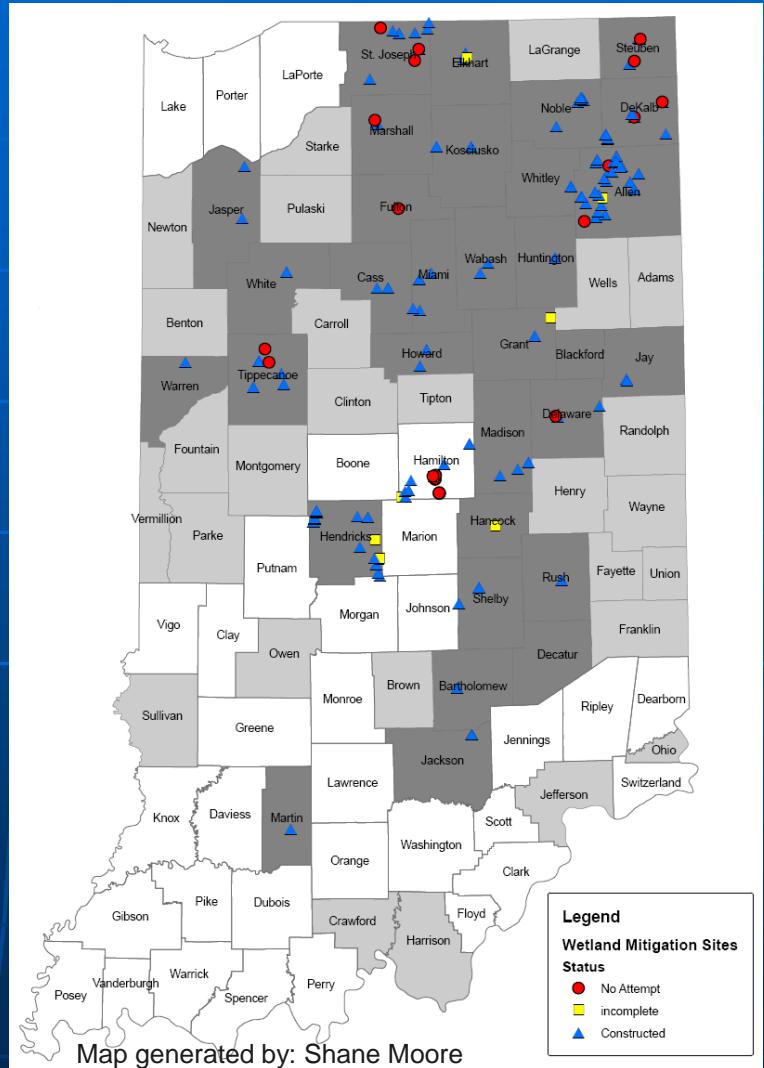


- Inventory mitigation sites required between 1986 and 1996
 - Classify each as constructed, incomplete or no attempt
 - Record each with GPS, and digital photo

Robb; N = 344 1986-1996

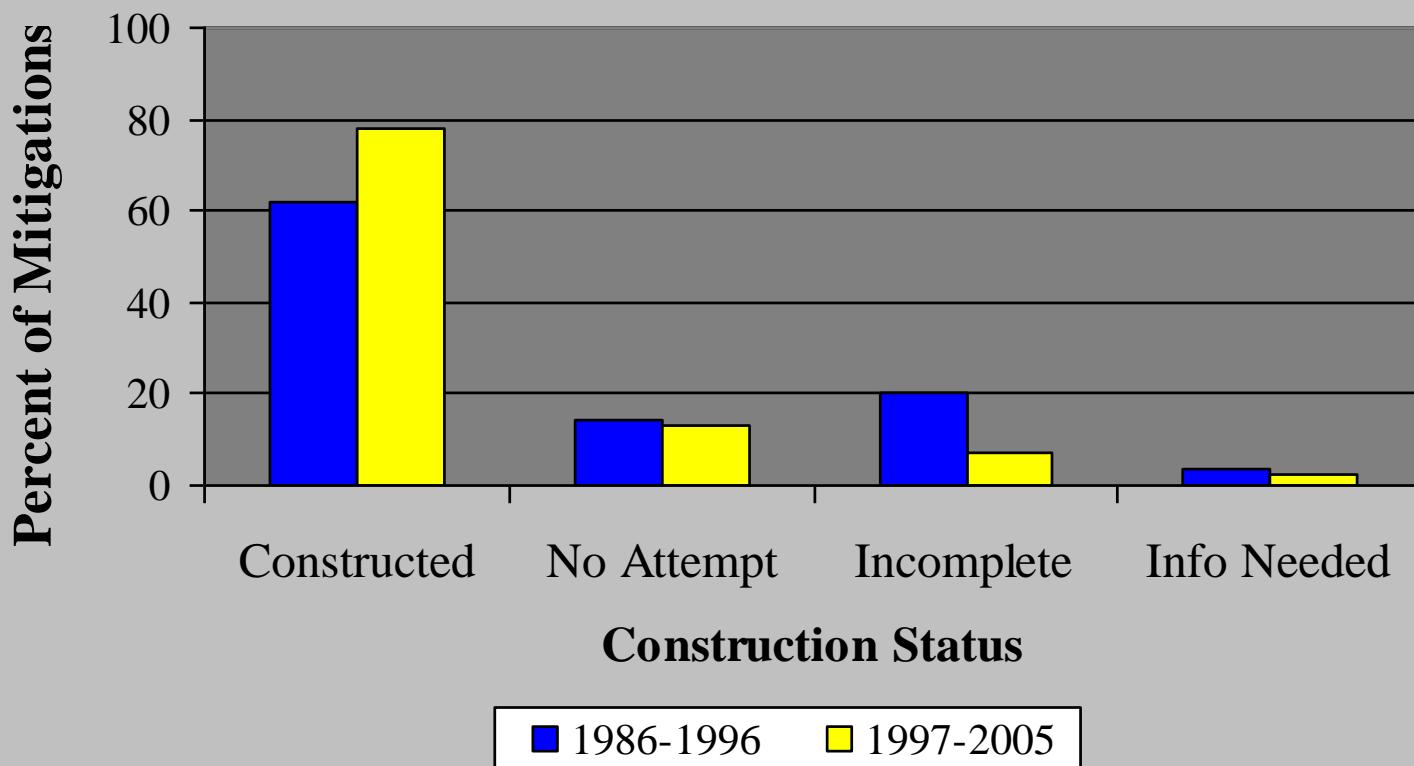


Bever; N = 192 1997-2005



Inventory Reiteration Results

Mitigation Construction Status



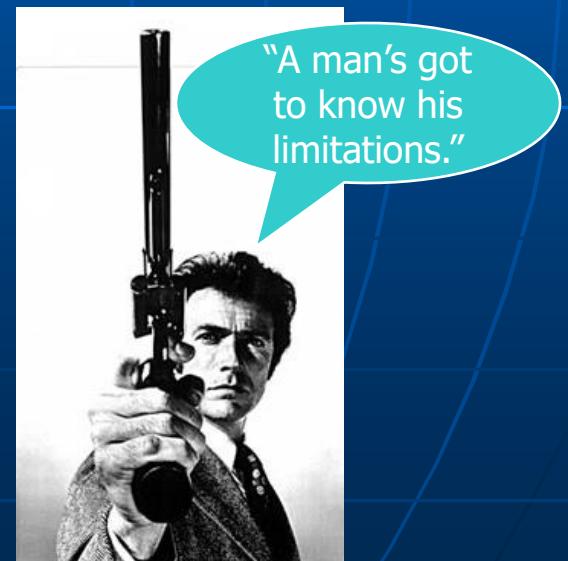
Keys to Successful Mitigation

- Serious consideration of avoidance and minimization
- Location: you can't force a wetland into the wrong location
- Wetlands move – let them
- Hydrology: complex yet simple--get the hydrology wrong and the site will fail



Common Pitfalls

- Increasing water depth, duration and frequency to hedge wetland establishment
- Steep slopes
- Static water levels
- Goose damage
- Exotic/invasive infestation
- Drainage interruption rarely results in the wetland area predicted
- Insufficient pre-project



Streams

- Ordinary High Water Mark

- The line on the shores established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank.

- Defined Bed and Bank

- A clearly defined channel regardless of size that is hydrologically connected.

Stream Mitigation

- Stream mitigation is typically 1:1
- All streams are different depending upon their location in the landscape and their function and use.
- In-stream habitat such as riffle-pool and meanders complexes should be replaced.

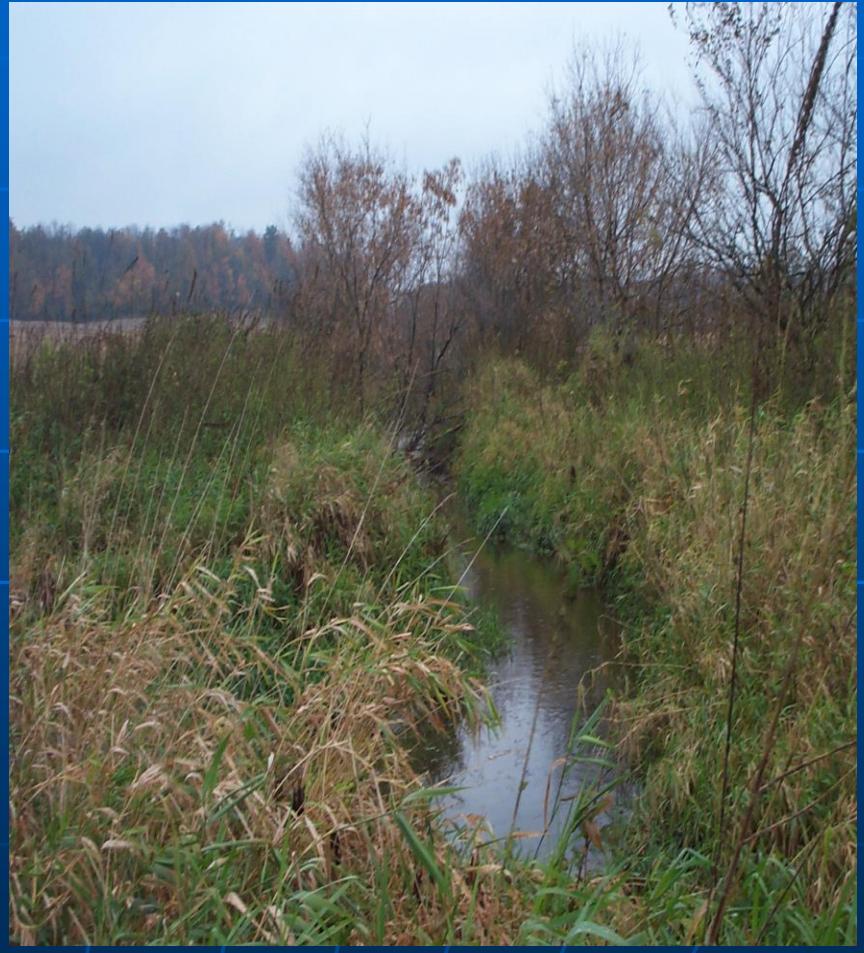
Stream Mitigation

- All streams should be reconstructed to original bank full widths.
- If the contributing watershed has increased due to reclamation activities then the new stream channels should be designed to handle the additional watershed.
- If a stream has a forested riparian corridor then the forested riparian corridor should be replanted along the mitigation stream.

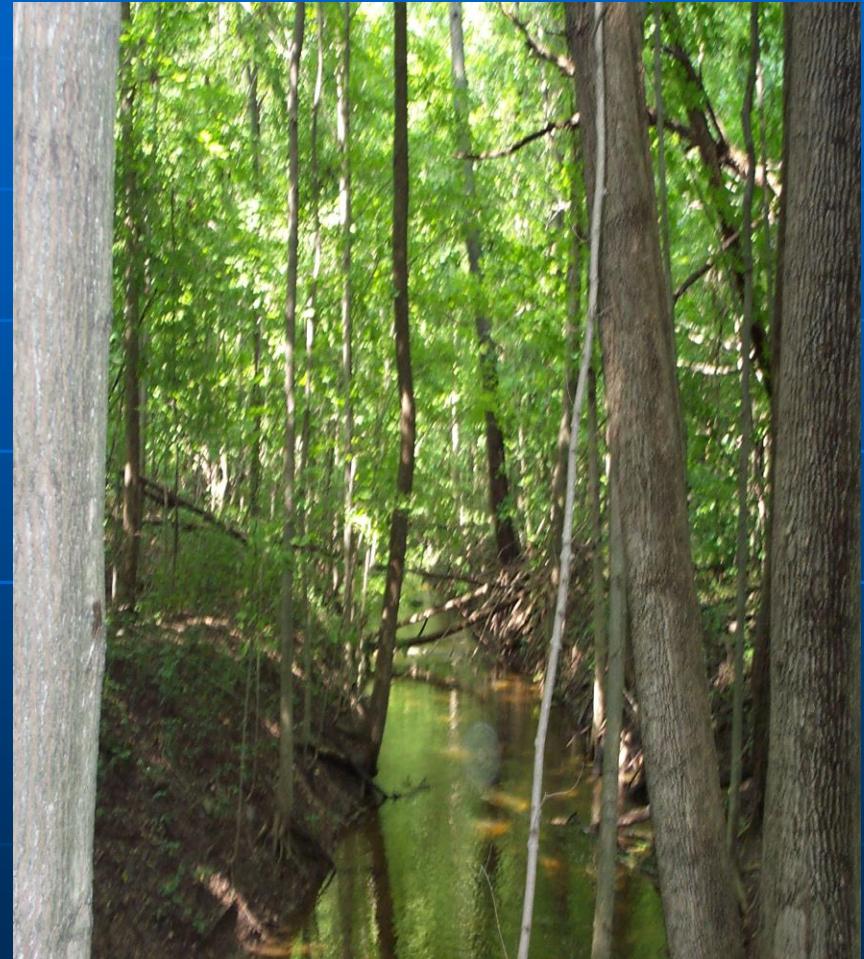
Forested Riparian Corridors

- Provide important water quality and habitat functions.
- All impacted streams with riparian corridors should be recreated with riparian corridors.
- Agency is looking for closure of canopy along streams. Ensure planting rates will achieve this.

Regulated Streams



Regulated Streams



Regulated Streams





Project Manager Regions

State Regulated Wetlands
and Section 401 Water
Quality Certification Programs

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04/12/2006

Additional Information

- IDEM water quality certification webpage.
 - <http://www.in.gov/idem/water/planbr/401/index.html>
- Army Corps of Engineers Section 404 permit program.
 - <http://www.lrl.usace.army.mil>

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