

# Compensatory Wetland and Stream Mitigation: Information that You Can Take to the Bank

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HOW TOMORROW MOVES



# COMPENSATORY WETLAND AND STREAM MITIGATION

- Background and regulatory framework.
- What is compensatory mitigation?
- When is compensatory mitigation required?
- How do you comply with mitigation requirements?
- What is the cost of mitigation?
- CSXT case studies.



# BACKGROUND AND REGULATORY FRAMEWORK

- CLEAN WATER ACT - Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is [exempt from Section 404 regulation](#) (e.g. certain farming and forestry activities).
- Construction projects that impact wetlands or streams require a permit from the USACE. The State/local jurisdiction may also require a permit.
- Compensatory mitigation (if required) will be part of the permit conditions.



# WHAT IS COMPENSATORY MITIGATION?



Compensatory mitigation refers to the restoration, creation, enhancement, or in certain circumstances preservation of wetlands, streams or other aquatic resources for the purpose of offsetting unavoidable, adverse impacts to aquatic environments.



# WHAT IS A STREAM?

A channel or watercourse that:

- Has a defined bed, bank, and ordinary high water mark.
- Can be naturally occurring, man-made, or man-altered.
- Can flow continuously (year round) or only during wet periods (ephemeral streams).



# NOT SO OBVIOUS REGULATED STREAMS

- Ditches, ditches, ditches...



Ephemeral Stream



Perennial Stream



Intermittent Stream



# WHAT IS A WETLAND?

Defined by the USACE and the EPA as areas:

- Inundated or saturated by surface or ground water;
- Having a prevalence of vegetation typically adapted for life in saturated soils; and
- Generally include swamps, marshes, bogs, and similar areas.



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# NOT SO OBVIOUS REGULATED WETLANDS

“Just a low area...ditch...swale”





# WHEN IS COMPENSATORY MITIGATION REQUIRED?

- Compensatory mitigation typically required if:
  - Wetland Loss > 0.1 acre.
  - Stream impacts that are considered more than “minimal”.  
Typically ~300-500 feet, depending on resource and impact.

*Mitigation Requirements are Location Specific.*



# HOW TO COMPLY WITH MITIGATION REQUIREMENTS

Applicant responsible for proposing appropriate mitigation & submitting mitigation plan with permit application.

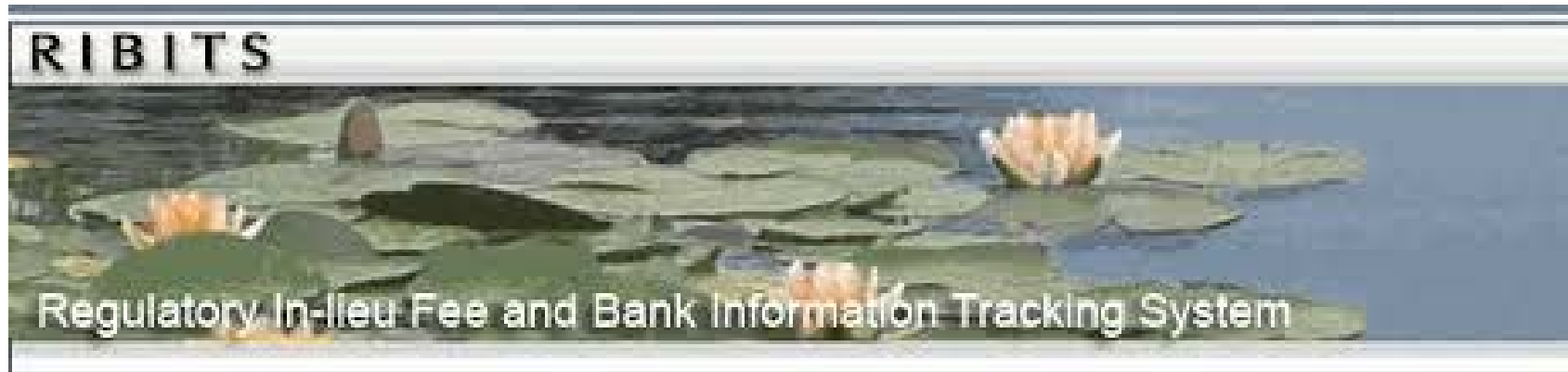
- Purchasing credits from an established wetland mitigation bank.
- Paying into an in-lieu fee program.
- Permittee-responsible mitigation.



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# MITIGATION BANKS/IN-LIEU FEE PROGRAMS



**RIBITS** (Regulatory In lieu fee and Bank Information Tracking System) - Wetland/Stream Mitigation Banks/In-lieu fee Programs

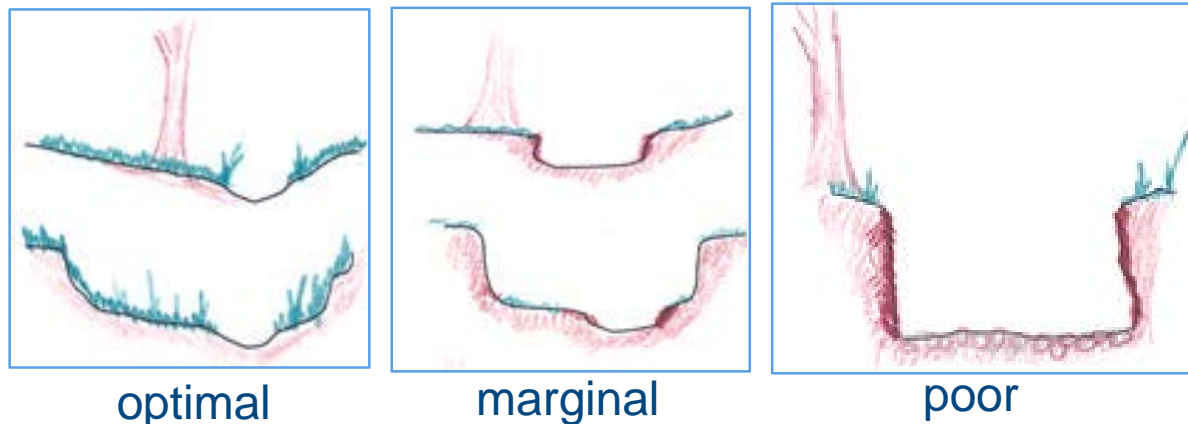
- This is a USACE website that lists approved wetland and stream in-lieu and mitigation banks.
- Map that shows location of banks and service areas.

*Preferable Option – No Long Term Commitments for Applicant/ Permittee*



# MITIGATION BANKS/IN-LIEU FEE COSTS

- Stream mitigation costs range from ~\$200 to ~\$700+ per foot of impact.
- Wetland mitigation costs range from ~\$25K to ~\$300K per acre of impact.
- Regionally highly variable.
- May be based on length of impact (only) or a host of variables (i.e., current channel conditions).



# PERMITTEE RESPONSIBLE MITIGATION

- Permittee-responsible mitigation (applicant responsible for the creation, restoration, enhancement, preservation of wetlands or streams).
  - On-site mitigation; or
  - Off-site mitigation.



Wabash River, Vincennes, Indiana



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# PERMITTEE RESPONSIBLE MITIGATION: WHAT'S INVOLVED?

- Identify potential properties that are suitable for mitigation.
- Prepare mitigation plan (how will you restore wetland/stream?)
- Submit plan to agencies for approval.
- Purchase property, if required.
- Monitor for 3-6+ years, depending on success of site.
- Control invasive species; replant, if required.
- Protect property in perpetuity through legal easement or deed restriction.



# PERMITTEE RESPONSIBLE MITIGATION, NEGATIVES:



- *Increases permitting time.*
- Long-term obligations.
- Can be very expensive and time-consuming (property purchase, legal documentation, monitoring/maintenance, protection in perpetuity).



# PERMITEE RESPONSIBLE MITIGATION: POTENTIAL SOLUTIONS

- Land swaps/purchase property for preservation.
- Third-party implementation of mitigation.
- Restoration of properties already protected by third party (i.e., Non-profits/USFWS/State agencies/State Parks).





# PROJECTS WITH REQUIRED MITIGATION – CSXT CASE STUDIES

(NO WETLAND BANKS OR  
IN-LIEU FEE PROGRAMS AVAILABLE)



# POSTON, SOUTH CAROLINA

- 4,600-foot Bridge Replacement.
- No permanent fill in wetlands.
- MITIGATION WAS REQUIRED.
  - Temporary impacts exceeded 90 days (Charleston-specific rule).
  - USACE required mitigation to be in-kind and within the same watershed.
  - Mitigation requirement met through donation of land to the SC DNR.
  - No long-term requirements.



# EVANSVILLE, IN

- Wetland fill – 0.26 acre of forested wetland.
- Agencies agreed to allow preservation; required USFWS to restrict future use of site.
- CSXT provided funding for the USFWS to purchase 15.6 acres to become part of a National Wildlife Refuge.
- No long-term obligations.
- Relatively low-cost solution.

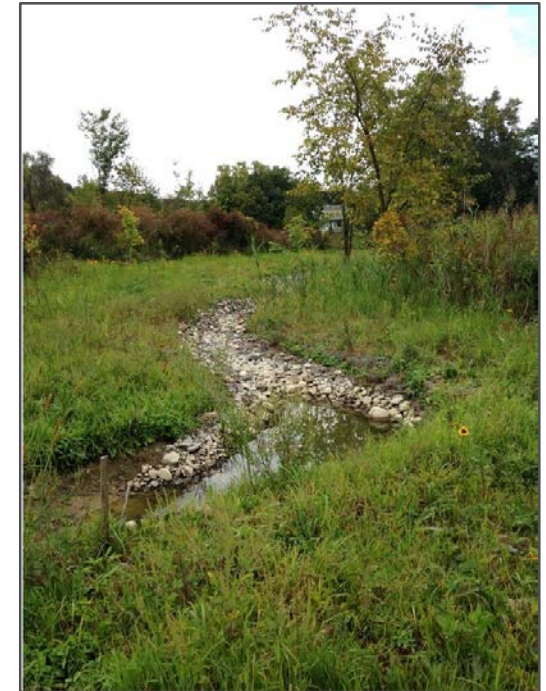


Preservation Site/Patoka River National Wildlife Refuge



# CATSKILL, NEW YORK

- Catskill: Third party (under contract to CSXT) identified to find, own, develop, monitor, and maintain mitigation site. Third party also to hold conservation easement.
- Lesson Learned - Third party option good approach, but need to identify third party and negotiate contract early to ensure does not delay permits and/or construction.



# HOW TO AVOID MITIGATION - EARLY PLANNING

- Review potential environmental constraints (wetlands & streams) during preliminary design of projects.
- *Work with design engineers – what looks like a ditch may be a stream.*
- Identify the potential need for mitigation early in the process.
- Reserve wetland/stream credits if in short supply.
- If mitigation banks or in-lieu fee programs are not available, evaluate potential to reduce impacts.
- **Mitigation options should be identified as early as possible.**
- **If no practicable alternative, get CREATIVE and THINK OUTSIDE THE BOX!**



Stream Relocation,  
Nortonville, KY



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# QUESTIONS?

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