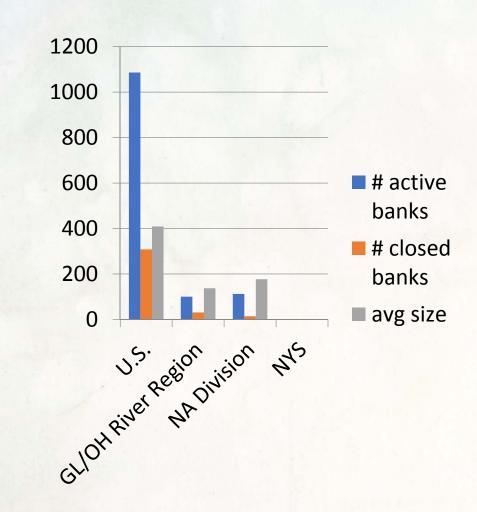


CNYRPDB Mitigation Interests

- Why consider stream and wetland mitigation –
 Planning Economic Development in concert with Environmental Stewardship
- What exactly is stream and wetlands mitigation –
 Biophysical enhancement and restoration
 Regulatory process to guide resource stewardship
- Where could this be accomplished
 - Mitigation can be used in a defined watershed The geographic boundaries are predefined

Presentation Purpose

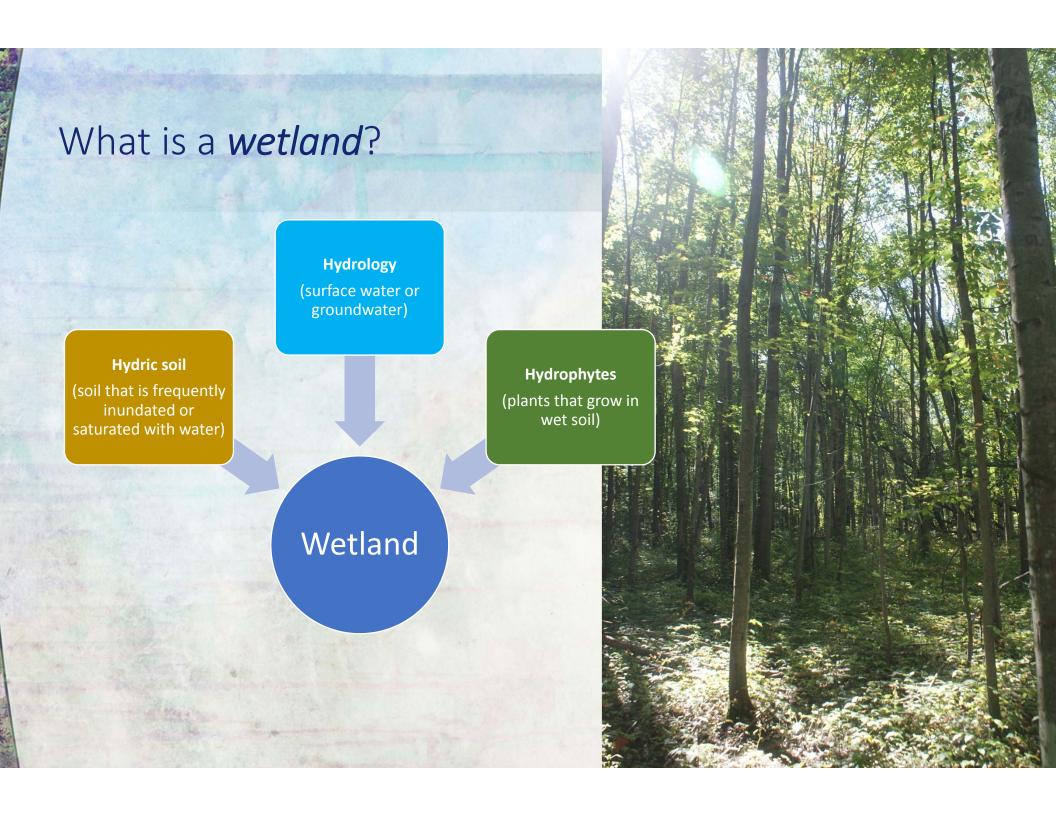
- To stimulate discussion regarding efficacy of wetland mitigation banking in NY
- Mitigation banking has not flourished in NY
- Does lack of banks limit economic development?
- Does this optimize protection of the resource?



Economic development is linked to environmental steward

- Demand analysis indicated 5 acres/year of Waters of the US compensatory mitigation needed in watershed service area
- NYS Waters are much more extensive and not included.
- NYS offset options are treated individually, expensive, and are a barrier to economic development while acres remain degraded.
- Local development plans and proposals also suggest potential need for wetland mitigation

What in the world is wetlands mitigation?



What are wetland benefits?



- Flood and storm control
- Wildlife habitat
- Groundwater protection & rech
- Recreation
- Pollution treatment
- Erosion control
- Education and research
- Open space and aesthetic value
- Nutrients for freshwater food cy
- Fish nursery grounds and sanctu

What is wetland mitigation?

- Wetlands are protected by federal and state laws
- Proposed impacts to wetlands must be avoided, then minimized
- Unavoidable impacts must be mitigated, or compensated for
- Accomplished by wetland creation, restoration, enhancement, and preservation
- Goal is no net loss of wetland functions and values (benefits)
- Mitigation plan developed through federal and state permitting processes



What is a wetland mitigation bank?

Federal definition of wetland mitigation bank

A wetland, stream, or other aquatic resource that has been restored, established, or (in certain circumstances) preserved for the purpose of providing compensation for unavoidable impacts to aquatic resources permitted under Section 404 or a similar state or local wetland regulation. A mitigation bank may be created when a government agency, nonprofit organization, or other entity undertakes these activities under a formal agreement with a regulatory agency.

4 distinct components of a mitigation bank



Bank site



 Physical acreage restored, established, enhanced, or preserved











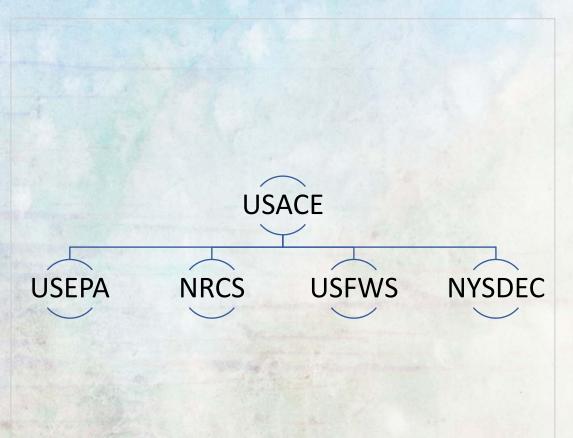
Bank instrument

legal agreement between bank owners and regulators

- Bank name, location, sponsor
- Bank objectives
- Site selection factors
- Proposed service area
- Sponsor's legal responsibility
- Site conditions
- Mitigation work plan
- # and type of credits
- Site protection instrument
- Financial assurances

- Performance standards
- Monitoring and reporting plan
- Credit release criteria
- Accounting procedures
- Maintenance plan
- Adaptive management plan
- Long-term management plan
- Default provisions
- Bank closure plan
- And more!

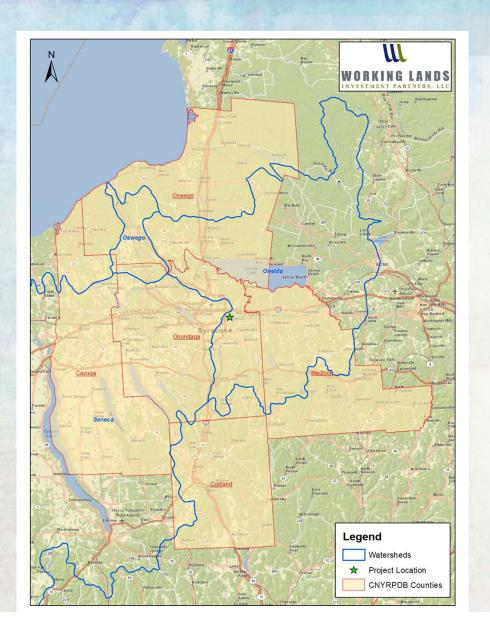
Interagency Review Team



- Team that provides regulator review, approval, and oversig bank
- Chaired by US Army Corps of Engineers
- Other members include US

 Environmental Protection Age
 Natural Resources Conservation
 Service, US Fish and Wildlife
 Service, and NYS Department
 Environmental Conservation

Service Area



- The geographic area in which permitted impacts can be compensated for at a given b (watershed approach)
- Proposed service area for CN is Oswego River/Finger Lakes Watershed
- Analysis of USACE-issued per in proposed service area 2010 2013 identified estimated neo 5 acres/year of compensators wetland mitigation

How does wetland mitigation banking work?

Here's how it works

Instead of multiple small mitigation projects ("permittee-responsible")...

| Applicant | Impacted Wetlands | Mitigation Required | Mitigation Plan |
|-----------|----------------------|------------------------|--------------------|
| Α | 0.5 acres | 1.5 acres | Onsite |
| В | 0.6 acres | 1.2 acres | Offsite |
| С | 1.2 acres | 2.8 acres | Onsite |

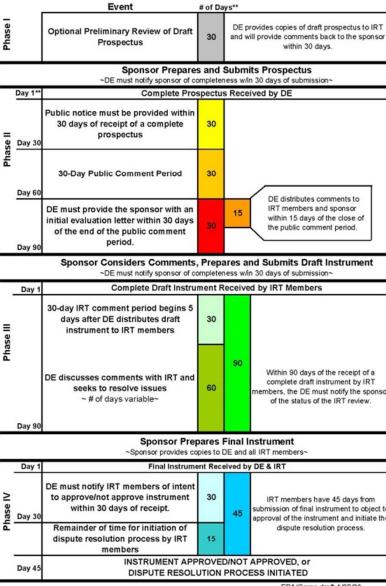
Mitigation banking creates few larger mitigation projects

| Applicant | Impacted Wetlands | Mitigation Required | Mi Pla |
|-----------|----------------------|------------------------|-----------|
| А | 0.5 acres | 1.5 acres | CN |
| В | 0.6 acres | 1.2 acres | CN |
| С | 1.2 acres | 2.8 acres | CN |

Process and timing for approval to develop a bank

This proposal is currently in Phase I of the process required to receive approval to create a wetland mitigation bank. The bank instrument will identify the timeframe for establishing and operating the bank, if approved. A 10year timeframe can be estimated to construct the bank, meet performance standards, and sell the credits. The site will then be managed in perpetuity to protect the resource.

Compensatory Mitigation Rule Timeline for Bank or ILF Instrument Approval*



EPA/Corps draft 4/02/08

Total Required Federal Review (Phases II-IV): ≤225 Days

^{*}Timeline also applies to amendments

^{**}The timeline in this column uses the maximum number of days allowed for each phase.

Examples of existing banks









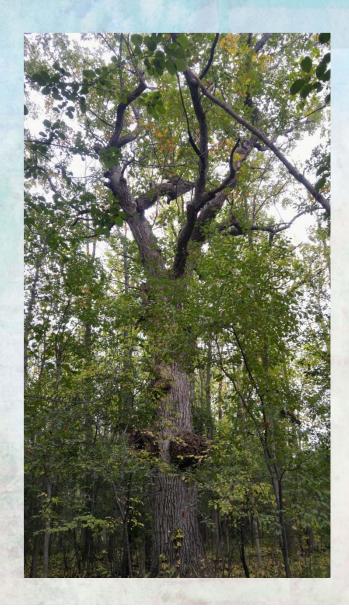
Advantages of mitigation banking

as compared to traditional permittee-responsible mitigation

- Greater certainty about outcomes
- Extensive financial, planning, and scientific resources
- Reduced permit processing times
- More cost-effective mitigation
- Efficient use of agency resources in review and compliance monitoring



Disadvantages of mitigation banking



- Pay to Pollute?
- Social Justice?
- Bankers skip town?
- Loss of wetlands?
- Other concerns?

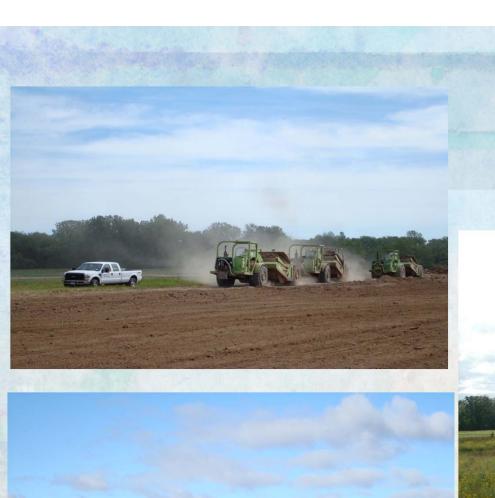
Examples of on the ground results in New York

2005 2009









Ecological Restoration Before, During, After





After







Why is a wetland bank being proposed for Central New York?

Good for the Environment - Biophysical

- "Functional lift"
- No (or less) temporal loss
- Activities may include:
 - Hydrology restoration i.e. remove tiles, dams
 - Improve species composition remove invasives, re-establish native species
 - Re-establish the appropriate wetland type i.e. forested, emergent, scrub shrub, salt, etc.



Examples of NY wetland degradation and restoration







Examples of NY wetland degradation and restoration





Examples of NY wetland degradation and restoration

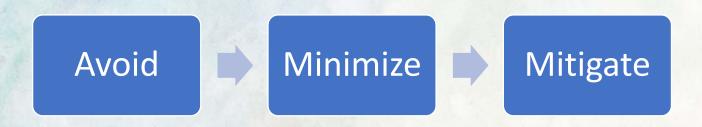






Good for the Economy - Economic Development

Cost effective mechanism to offset unavoidable impacts



- Mitigation Banking economic advantages
 - Principal business is to provide functions and values (ecosystem market)
 - Banks are regulated involve contractual obligations to agencies
 - Responsible for offsets in perpetuity liability transfers from permittee







Good for Quality of Life

Comments, Questions, Discussion

THANK YOU FOR PARTICIPATING!