

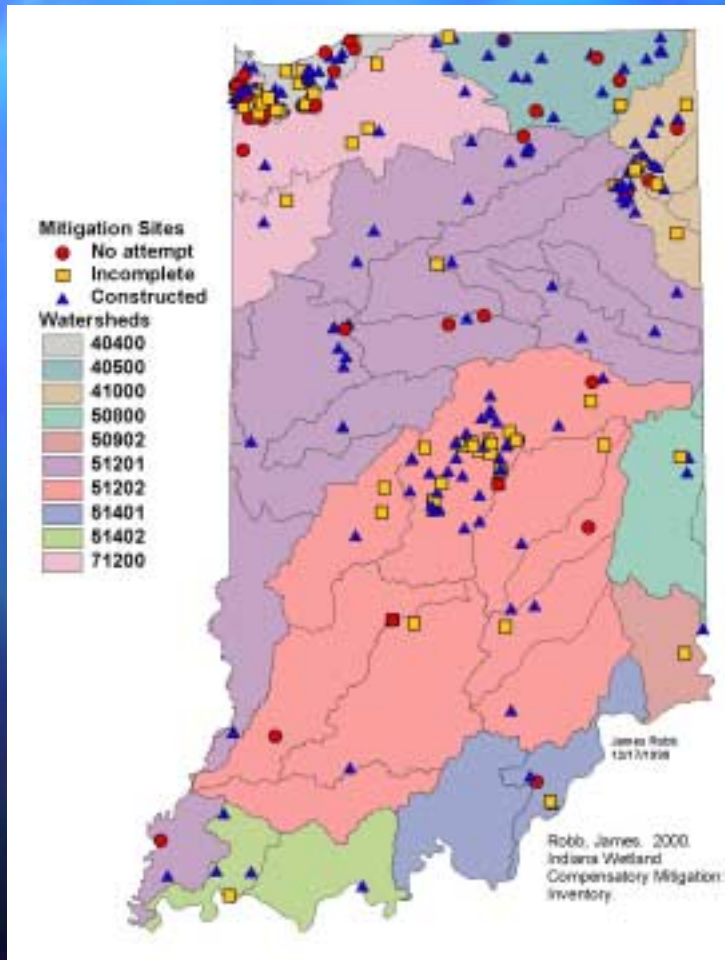
Effect of NRC Recommendations on Indiana's Wetland Protection Program

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Topics of discussion

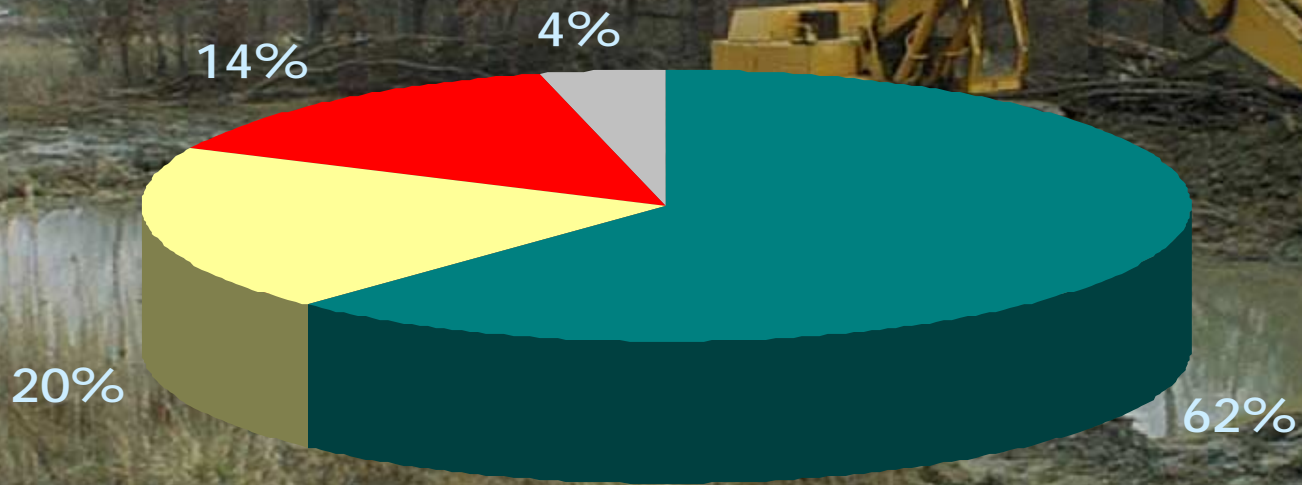
- Compliance/performance documented in Indiana
- Effects of NRC Recommendations on IDEM Policies
- Potential policy changes in the wake of the NRC report
- Limitations

Inventory of Indiana Mitigation Sites



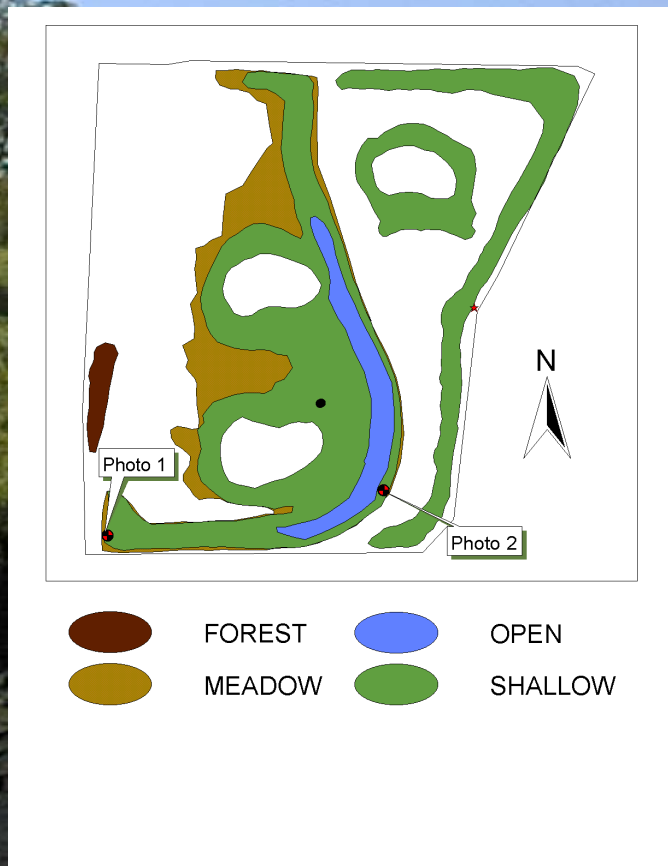
- Mitigation sites required between 1986 and 1996
 - Classify each as constructed, incomplete or no attempt
 - Record each with GPS, and digital photo

Inventory Results



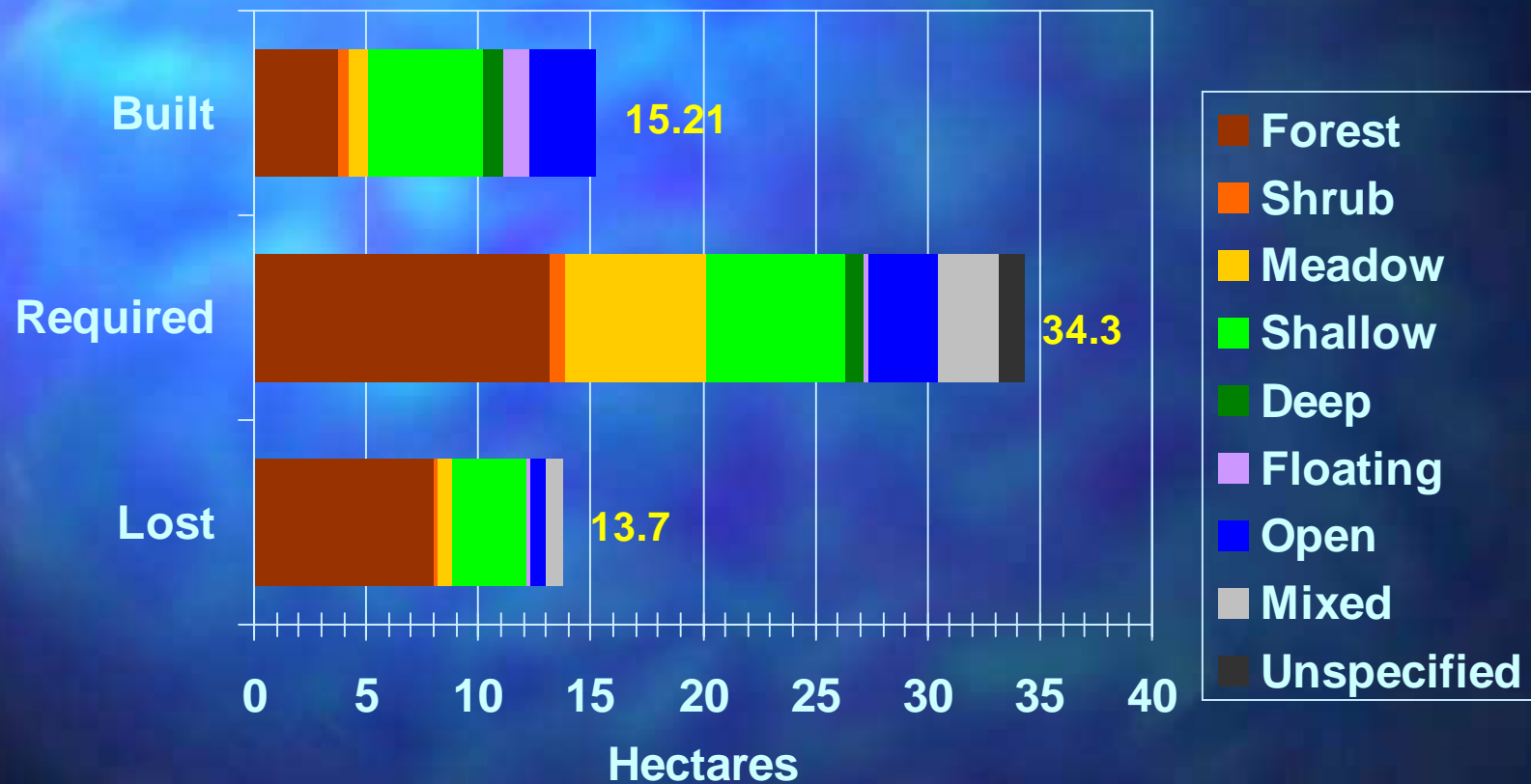
■ Constructed ■ Incomplete ■ No attempt ■ Info needed

Area Measurements

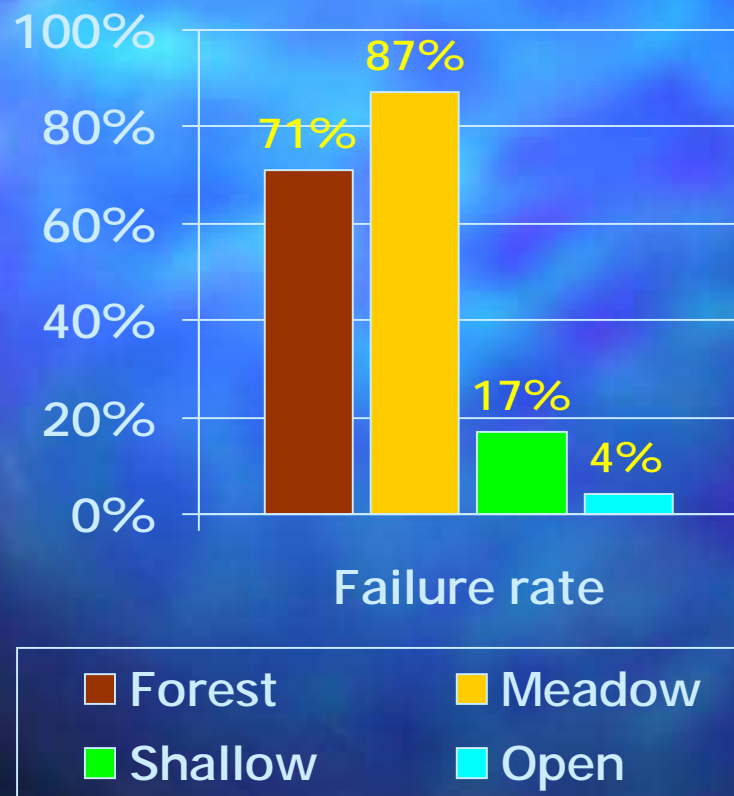


- 31 randomly chosen sites
- Map wetland extent with mapping grade GPS
- Map vegetation communities

Area Measurement Results



Failure Rates & Ratios



- Ratios to achieve 1:1 replacement
 - Forested 3.4:1
 - Meadow 7.6:1
 - Shallow 1.2:1
 - Open water 1:1
- Insufficient data to evaluate other communities

Policy Comparison

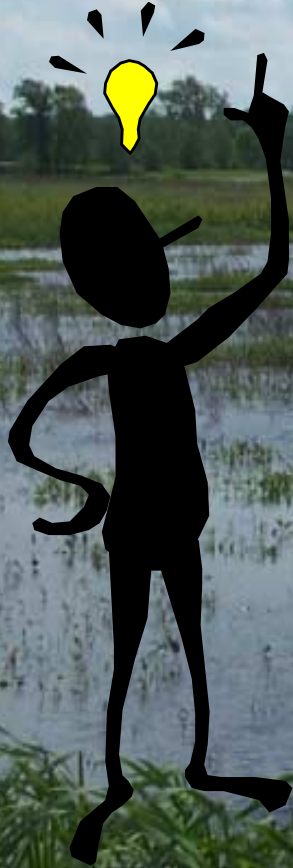
■ NRC Reinforces

- Performance IDEM documented
- Up-front mitigation for some wetland types
- Higher ratios
- Long-term research program
- Mitigation banking

■ NRC Contradicts

- IDEM: performance over process (design criteria)
- IDEM: preference for in-kind/on-site
- IDEM: structure based
- IDEM: no in-lieu fees

Policy Changes



- Financial assurances
- Move from on-site to watershed emphasis
- Staff training programs
- Database Tracking
- Increased follow-up
- Enforcement
- Eventually: Basin-wide restoration planning

Limitations

- SWANCC/Tulloch
- Funding
 - Reduce state match
 - Increase amount of money
 - Long-term grants
 - Operational grants
- Access to training
- Legal limitations



More Info

■ Indiana Mitigation Study

- <http://www.in.gov/idem/water/planbr/401/401home.html>
- James Robb 317-233-8802

■ ASWM Mitigation Performance bibliography:

- <http://www.aswm.org/mitigation>