Ecosystem Banking
Best Practices

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Technology Transition – Supporting DoD Readiness, Sustainability, and the Warfighter
Presentation Highlights

• Best Practices Study Objectives
• Preliminary Findings
  – Best Practices: Non-military
  – United States Army Context
• Conclusions
Study Objectives and Methods

- How are other federal and state agencies meeting mitigation requirements?
- What are the benefits of using these approaches?
- What are important lessons learned?
- What can be transferred to the Army?
  - Current practice and context

- Literature review
  - Case selection
  - Case study follow-up
- Interviews with military subject matter experts
  - Case study visits
Best Case Sources

- Case Studies, Center for Environmental Excellence by the American Association of State Highway and Transportation Officials
- 2005 Status Report on Compensatory Mitigation in the United States, Environmental Law Institute, April 2006
- State Wetland Protection - Status, Trends, & Model Approaches, Appendix: North Carolina, Environmental Law Institute, 2008
- Banks and Fees – The Status of Off-Site Wetland Mitigation in the United States, Environmental Law Institute, 2002
- Federal Highway Administration (FHWA) Exemplary Ecosystem Initiatives, FHWA, 2006
- Results of the FHWA Domestic Scan of Successful Wetland Mitigation Programs, FHWA, December 2005
- 2009 Environmental Excellence Awards, FHWA
- Success Stories in Transportation Enhancements, National Trails Training Partnership, Nature Conservancy, Revised November 2000
Approaches for Mitigation Banking

- Ecosystem-Based
- Multiple Issues
- Single Issue & Programmatic
- Single Issue & Project Focus
Ecosystem-based

Multiple Issues

Single Issue & Programmatic

Single Issue & Project Focus

• Challenges of this approach continue to accumulate
  – Difficult to monitor
  – Inefficient/not cost effective
  – Poor ecological results
  – Often are not permanent
  – Internal capability/performance may not be sufficient

• Historically, lack of drivers for alternatives

• Includes project-by-project credit purchases
Case Selection: Relevance to the Army

- Off-Site Banks
- Geographic locations across the United States
- Variation
  - Scale
  - Size
- Ecosystem issues similar to those of Army installations
  - Community development pressure
  - Habitat/endangered species
  - Multiple mitigation needs
Case Selection: Relevance to the Army

• Outcome criteria
  – Transfer compliance burden for mitigation to other entities
  – Utilize expertise for ecosystem management that the organization doesn’t have
  – Achieve multiple mitigation credits or ecosystem-related objectives in a single bank

• Outcomes beyond mitigation objectives
  – Creation or maintenance of wildlife habitat
  – Recreation and other benefits to the community
  – Buffering and other benefits to adjacent preserves and wildlife management areas
  – Contribution to local and state ecosystem objectives
  – Creation of new partnerships with stakeholders
Selection of Best Practices

Preliminary - 52 of 90

- 38 Preliminary Selection
- 52 Not Selected

Final - 15 of 52

- 15 Best Practices
- 37 Not Selected
Types of Mitigation – Cases With Each

- Wetlands: 14 cases
- Stream: 4 cases
- T&ES Habitat: 8 cases

Total: 15 cases
Types of Mitigation – Per Case

- Wetlands, Streams & Habitat: 2 cases
- Wetlands & Habitat: 5 cases
- Wetlands & Streams: 2 cases
- Habitat Only: 1 case
- Wetlands Only: 5 cases

Number of Cases
• Arkansas Highway and Transportation Department
  – Owns/manages banks, wetland focus
  – Partner agency administers banking

• Texas Department of Transportation
  – Owns/manages banks, wetland focus
  – Partner agency manages banking
• Alabama Department of Transportation
  – Two banks provide conservation credits
  – Has begun focus on stream mitigation

• North Carolina Department of Transportation
  – State-wide strategic effort to manage wetland and stream mitigation
  – Very high compliance for both issues

• Oregon Department of Transportation
  – Blends wetland program with habitat/species objectives
  – Banks currently produce both credits
- County of San Diego
  - County-wide focus on native vegetation and habitat for many species
  - Many partners to integrate into planning activities across the county
  - Coordination between all bank and preserve owners and developers

- Florida Department of Transportation
  - Shifted to regional, multi-use mitigation
  - Many agencies work together for mutual benefits
  - Established large preservation corridors and mitigation “parks”
Findings to Date: Non-Military

• Drivers for innovation
  – Ecological ineffectiveness of traditional mitigation
  – Delays in completing mitigation
  – Lack of capability and/or performance in the organization

• Best practices
  – Establishing partners for significant roles or other benefits
  – Stacking or seeking multiple credits in banking projects
  – Utilizing an ecosystem-based approach
  – Allowing different approaches in a mitigation program

• Innovation was necessary, but results are not clear
Findings to Date: Army

- Regulatory mitigation requirements typically met on-post
- This practice cannot continue:
  - Concern about permanent restrictions on military lands
  - Continued pressure to natural resources due to changes in off-post land use
Findings to Date: Army

• Opportunities for off-site mitigation
  – Commercial banks
  – Partner-led banking on buffer lands
  – Easements and other land purchases
  – Recovery Credit Systems

• Challenges
  – Complexity
  – Field work to identify parcels and willing land owners
  – Project-driven focus
  – Funding
Opportunity: Partner-led Banking Army Compatible Use Buffer Program

- Mission-driven
  - Capability, capacity, accessibility
- Address encroachment concerns
  - Threatened & endangered species
  - Population growth and land use change
- Partners contribute funds
- Willing land owners
ACUB – Fort Stewart, Georgia

Source: FY08 ACUB Year End Summary, Army Environmental Management Command
Opportunities with ACUB

- Continue education internally and externally
- Look for opportunities for multiple benefits in each buffer transaction, even if they may not be needed today
  - Regulatory drivers, CWA, ESA, etc.
  - Before the deal is made!

- Identify Encroachment Drivers
- Identify ACUB Opportunities
- Look for ways of expanding benefits
- Partner sets up bank, Army single user
- Partner sets up bank, Army receives credits and % are sold to others
Fort Benning ACUB

• Large number of military construction projects = need for wetland and stream mitigation credits
• Shortage of available credits from restoration (preferred)
• 400 acres ACUB conservation easement
• Mitigation credits established by preservation; sole source to Fort Benning
• Within impacted watershed – ecologically a “no brainer”
• Creative and innovative landowner working with existing partner – The Nature Conservancy
• Time and thought needed ahead of time when “layering” programs
Opportunity – Recovery Credit Systems

- Establish Credits
  - Identify threats to species and habitats
  - Identify action needed to address these threats
  - Only federal agencies
  - Only listed species

- Must provide a net benefit to the species

- Alternative to Conservation Banks
  - Ability to engage private land owners

- Temporary or Permanent depending on nature of impacts
Fort Hood RCS: Golden Cheeked Warbler

- Successful “proof of concept” demonstration
- Temporary credits apply to temporary impacts – permanent credits are needed for permanent impacts
- Engagement of private landowners in conservation
- Need to ensure adequate monitoring
- Working to ensure achieve a net benefit to the species
  - Management actions
  - Conservation metrics
Opportunities with RCS

- Potentially lower costs for mitigation
- Maximum flexibility to meet all possibilities where and when appropriate
- Still being developed and tested
Conclusion

• When does it make sense?
  – Any time the military, community, and environment benefit
  – Management responsibility by partner
  – Meeting multiple objectives to increase return on investment

• More complexity: each base, each property, each property owner - all are unique
  – Equals more upfront investment
  – Solutions need to be flexible – what works best for the situation
Ecosystem-based, Future-oriented, Landscape Scale, Partnering

- Ecosystem-based
- Multiple Issues
- Single Issue & Programmatic
- Single Issue

Clearly defined regulatory or encroachment issue that must be addressed

More Time, More Risk
More Options, More Benefits
Points of Contact

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