4th Stakeholder Forum on Federal Wetland Mitigation
September 20-22, 2004
Tampa, FL

Developing Performance Standards Guidance
Performance Standards:

Criteria used to determine if a project attains specific structural or functional goals as intended by design. *Wetland Engineering Handbook 2000*

“Measures of wetland structure or type or a functional assessment score.” *NRC 2001*

“Clear, precise, quantifiable parameters that can be used to evaluate the status of desired functions” *Model Mitigation Plan Checklist 2003*
Mitigation performance standards need to assure ecologically sustainable outcomes and be enforceable.
Examples of mitigation performance standards:

• Specific hydrologic, soil, & vegetation conditions
• Vegetation cover (%)
• Plant species survival
• Slope, sinuosity, bankfull width
• % cover of invasive species
• Specific aquatic invertebrate taxa
Concerns with mitigation include:

(NRC 2001)

- Failure to construct/complete mitigation
- Unclear permit requirements
- Failure to satisfy permit conditions
- Failure to offset impact acreage/function
- Superficial description of intended functions
- Lack of legal & financial mechanisms to ensure completion & protection
Concerns with Performance Standards

- Performance standards are often:
  - Not included in permit/banking documents
  - Not measurable/observable
  - Vague and unenforceable
  - Narrowly focused on vegetation
Use existing research on biological indicators/functional assessments for evaluating performance and feedback from stakeholders and regulators to:

- Clarify key concepts related to performance standards
- Develop performance standards and monitoring/adaptive mgmt guidance for mitigation sites by 2005
Constraints on Performance Standards

- Measurable/observable
- Direct/uncomplicated measures
- Repeatable
- Enforceable
- Cost
A framework for Performance Standards

- Administrative standards
- Physical/ecological standards
- Adaptive Management Standards
Administrative performance standards

- Financial assurances
- Site protection
- Assignment of responsibility
- Construction schedules
- Monitoring
- Maintenance
- Long-term management
Physical/Ecological Standards

- **Structural Components**
- **Community or Functional Performance Components**
Physical/Ecological Standards:

**Structural Components**

- **Site Description** - e.g. Size, HGM, Cowardin, Rosgen
- **Hydrology** - e.g. jurisdictional, periodicity,
- **Soils** - hydric, constituents, structure
- **Vegetation** - jurisdictional, community composition & structure
- **Stream** – e.g. slope, sinuosity, profile
Physical/Ecological Standards: Community/Functional Performance

- Specific community objectives met/ functions performed

- Indicators of biological/functional attainment
  - Specific measures – e.g. bankfull width, snag density, foliage height diversity
  - Composite measures – e.g. FQAI, HSI/HUs, IBI, FCI/FCU (HGM Assessments), WRAP scores
Why Adaptive Management?

- Wetlands are complex/dynamic
- Ability to predict response is limited
- Limited resources

- Do we focus on Function, Community, or Process?
- Need for sustainable mitigation in face of uncertainty
Adaptive Management Standards

- Feedback Process
  - Monitor site & implementation
  - Analyze outcomes
  - Incorporate results into future actions
- Encourage experimentation
- Link administrative & physical/ecological standards
- Increase likelihood of sustainability
Questions/Feedback?