

Framework for Enforceable Performance Standards

Session 7



Objectives:

- Describe:
 - Types of mitigation performance measures
 - Ecological Performance Standards
 - Enforceable Ecological Performance Standards
- Determine whether a performance standard is enforceable

Mitigation performance measures

- Administrative measures
- Adaptive management measures
- Ecological performance standards



Administrative measures

- Responsibility *332.8(d)(6)(ii)(C)*
- Financial assurances *332.8(m)*
- Site protection *332.8(m) & (t)*
- Construction
- Monitoring *332.6, 332.8(q)(2)*
- Maintenance *332.4(c)(8)*
- Long-term management *332.8(u)*



Why Adaptive Management?

- Aquatic resources are complex/dynamic
- Limited ability to predict response
- Limited resources
- To better ensure sustainable mitigation in face of uncertainty

Adaptive management measures

- Learn from success/failure
- Increased sustainability
- Steps
 - Plan, including contingencies
 - Monitor site
 - Analyze outcomes
 - Incorporate results into future actions



Adaptive Management Plan

(33 CFR 332.7(c))

- Plan
- Construction
- Performance standards
- Monitoring
- Management activities



Ecological performance standards along with administrative & adaptive management measures ensure site is:

- Completed
- Evaluated
- Managed



Ecological Performance standards

(33 CFR 332.5)

To determine whether project is achieving objectives based on:

- Objective and verifiable attributes
- Best available science that can be measured or assessed practicably
- Variables or measures of functional capacity or condition

Another way to think about Performance Standards :

- Success criteria
- Measurable/observable benchmarks for evaluating attainment of
 - Project goals
 - Structure
 - Function/condition



Types of ecological performance standards

- Structural measures
- Ecological measures



Structural measures

- Description - Size, classification (HGM, Cowardin, Rosgen), jurisdiction
- Hydrology - duration, periodicity
- Soils - hydric, constituents, structure
- Vegetation - dominants, species composition, structure
- Stream – sinuosity, cross section, bankfull width, particle size



Ecological measures

- Specific objectives met/functions performed
- Indicators of functional attainment or community condition
 - Specific measures – e.g. snag density, foliage height diversity, channel profile
 - Composite measures – e.g. FQAI, HSIs, IBI, FCI/FCU (HGM Assessment), etc.

Enforceable Performance Standards



Some identified problems with mitigation include:

- Unclear requirements
- Failure to meet those requirements
- Superficial description of intended structure or function



Examples:

- Hydroperiod
- Soils



Performance standard is enforceable if:

- Responsible party can be made to comply
- Likely to be upheld in court
- Simple, clear, unambiguous, & precise

Steps for developing an enforceable performance standard

- 1) Goal - Statement of intended outcome
- 2) Objective - features critical to desired outcome
- 3) Performance Standard:
 - Attribute
 - Level
 - Period of time

Goal - broad statement of intended outcome



Objective - features critical to desired outcome



Performance Standard - attribute, level, & time



An enforceable performance standard must be:

1. Related to a specific objective
2. Directed at evaluating progress toward that objective

By Year 5:

10 ac +



+



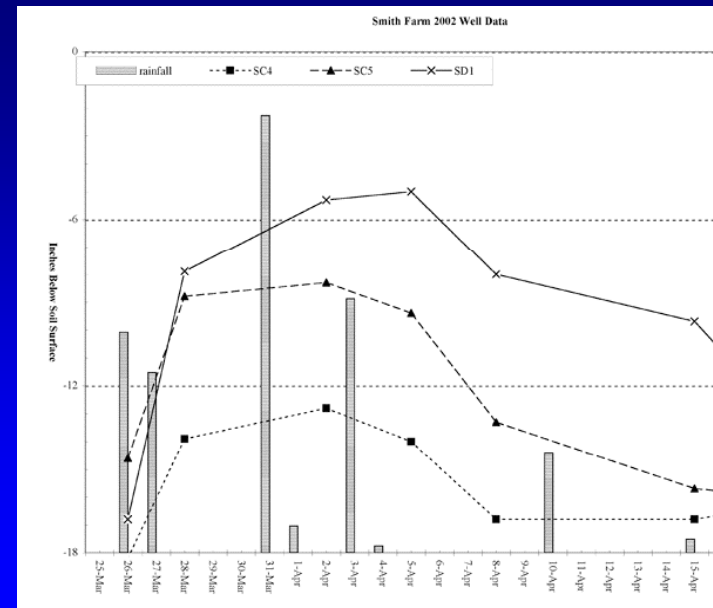
Enforceable performance standards must:

- Focus on a measurable outcome NOT completion of an action
- Include clear measures:
 - Qualitative or
 - Quantitative



Enforceable performance standards should:

- Identify indicators to be monitored
- Identify specific attributes of those indicators to be monitored



Enforceable?

- Control invasive plant species
- Water at or within 12" of surface for 30 days
- Stream banks shall be stable
- Instream structures are maintaining integrity and not adversely affecting stream



Enforceable

400 woody stems/ac of native tree spp. by the 3rd year following construction

Top 12" of loamy & fine textured soils shall have a bulk density of $< 85\text{lbs/ft}^3$ (1.35 g/cc) at completion of grading

USFS Stream Reach Inventory & Channel Stability Evaluation (Pfankuch, 1975) rating shall be "Good" each year, beginning with Year 2.

Other examples ?



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