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## **A Suggested Approach to Enforceable Performance Standards**

### ***Considerations in writing performance standards***

Performance success must be clearly stated so that it can be understood and evaluated by the permittee, mitigation provider, and regulator and enforced.

- The language used in performance standards must be precise and unambiguous to define compliance.
- Standards should be measurable outcomes not actions. Instead of stating that “the permittee will build 10 acres of wetlands” stipulate that “the wetland area will be at least 10 acres”,
- State exactly what indicators are to be monitored, such as woody stems, invasive species, or hydroperiod.
- Identify which attribute of the indicator will be monitored, such as percent cover of herbaceous vegetation, density of woody stems, size of the mitigation area, or required duration of inundation or saturation.
- Specify the desired or required level of an attribute in terms of minimum, maximum, or ranges of values. Don’t stipulate an exact number unless an exact number must be achieved.
- Write standards with the intent of exceeding minimum thresholds. This will help avoid remedial action when the result is slightly below the standard.
- Identify when the attribute should be monitored and when standards must be met. For example, “herbaceous vegetation must exceed 80% cover within 3 years following initial planting”.

### ***Suggested steps for developing performance standards***

Development of enforceable mitigation performance standards may follow these steps:

#### ***1. Identify the desired aquatic resource.***

Clearly identify the type of aquatic resource intended as compensatory mitigation. Be specific. It may be easier to evaluate successful establishment of “a regularly inundated intertidal estuarine emergent fringe wetland dominated by saltmarsh cordgrass (*Spartina alterniflora*)” than a “saltmarsh”.

#### ***2. Research restoration or establishment of the desired aquatic resource***

Determine whether restoration/establishment of the resource is feasible. Restoration or establishment of some resources such as old growth bottomland hardwoods, bogs, and fens may be very difficult. If the project is feasible, consult applicable references that characterize the structure, function and services provided by the desired resource. Scientific literature as well as consultation with knowledgeable colleagues can suggest possible standards for evaluating mitigation success.

**3. Specify project goals, objectives, and performance standards**  
***Project Goals ==>Objectives ==> enforceable performance standards***

Enforceable performance standards are driven by project goals and objectives.

The **project goal** is a broad statement of the intended outcome of the mitigation project including a list of the functions or services to be provided by the mitigation site. For example, “restoration of a scrub-shrub wetland that provides habitat for specific neotropical migratory bird species”.

**Project objectives** should include the specific elements, functions, or services to be provided by the project and those features that are critical to establishment of the desired aquatic resource. Well-defined objectives suggest specific performance standards and allow evaluation of the success or failure of the mitigation project. A set of stated performance objectives for a mitigation project might be:

“Establishment of a 10 acre seasonally inundated palustrine scrub-shrub wetland that provides high quality nesting habitat for the common yellowthroat (an eastern warbler) within 5 years.”

**Performance standards** allow evaluation of the extent that project objectives have been met (e.g., full achievement, partial achievement, or failure). Each performance standard should identify: 1) the attribute to be achieved; 2) the condition or level that defines success; and, 3) the period of time over which success must be sustained. These standards may be based on professional experience, literature, previous mitigation projects, reference data, or data from the impact analysis driving the mitigation project.

Performance standards used to evaluate project objectives in the example above might be stated as a requirement to achieve the following measures within 5 years following site preparation activities:

Create a 10-acre wetland area with:

- More than 50% cover provided by native deciduous shrub species;
- Mean shrub canopy height greater than 5 feet;
- More than 60% of the canopy species consisting of hydrophytic shrub species; and
- Water on the surface of the wetland for 30+ consecutive days between January and May under typical precipitation conditions (5 out of 10 years)

Good performance standards balance accountability and flexibility. It may be more effective and efficient to measure attributes or indicators rather than specific functions or services). For example, while it is possible to measure denitrification provided by a wetland system, it is easier and more cost effective to measure hydroperiod fluctuations, redoximorphic concentrations, and accumulation of soil organic matter as indicators of denitrification.

***4. Consult District Mitigation Guidelines and Checklists when developing performance standards***

District guidelines and checklists may suggest or include useful standards for evaluating the performance of mitigation sites.

***5. Coordinate development of performance standards with other resource professionals***

Resource professionals are valuable sources of information and experience. Solicit their review on proposed standards. Governmental and non-governmental agencies, including private sector professionals, academics, and those responsible for implementing mitigation projects may provide valuable suggestions for developing performance standards.

***6. Share successful performance standards within the program.***

Development of useful performance standards takes considerable time and effort. Circulation of proven standards, including administrative standards approved by the Office of Counsel, can expedite permit issuance and reduce duplication of effort. Existing coordination mechanisms such as public notices, the mitigation banking listserve, and the Regulatory Information Exchange (RIX, <http://155.79.114.198/>) hosted by Chicago District may prove useful.

***7. Review and revise performance standards***

Knowledge related to compensatory mitigation continues to grow. Established performance standards should be reevaluated and revised periodically to consider advances including recent research, lessons learned from other Districts, and monitoring data from similar mitigation projects. Scheduling annual mitigation project reviews and encouraging feedback from colleagues, federal and state agencies, non-governmental organizations and consultants on “lessons learned” are good ways to expand institutional knowledge on practices that encourage successful mitigation projects.