



**US Army Corps
of Engineers**



**United States Army Corps of Engineers
Regulatory Branch
Washington, D.C. 20314**

**United States Environmental Protection Agency
Wetlands Division
Washington, D.C. 20460**

SEP 15 2004

MEMORANDUM TO THE FIELD

SUBJECT: Stream Mitigation Compendium

We are pleased to enclose, as part of the implementation of the National Wetlands Mitigation Action Plan, a technical resource document to assist with stream mitigation entitled: *Physical Stream Assessment: A Review of Selected Protocols for use in the Clean Water Act (CWA) Section 404 Program* (Stream Mitigation Compendium).

As noted in the U.S. Army Corps of Engineers Regulatory Guidance Letter 02-2, authorized impacts to streams require appropriate and practicable compensatory mitigation to replace lost or degraded stream functions (40 CFR §230.10 (d)). In support of RGL 02-2, the Stream Mitigation Compendium is intended as a reference that can be consulted by regulatory agencies, resource managers, and restoration ecologists in order to select, adapt, or devise stream assessment methods appropriate for impact assessment and mitigation of fluvial resources in the CWA Section 404 Program.

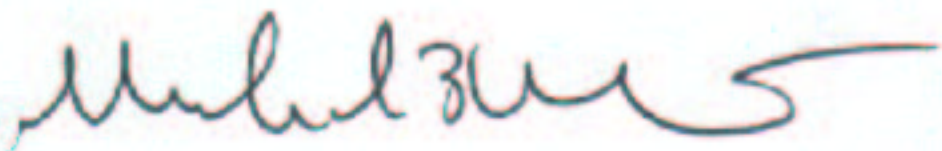
The physical, chemical, and biological properties of streams vary both within and among regions, thus stream assessment/mitigation protocols must be tailored to address this variability. However, all protocols used in the CWA Section 404 program should have the following characteristics:

1. **Classification:** Stream assessment should be preceded by classification to narrow the natural variability of physical stream variables.
2. **Objectivity:** The assessment procedure should remove as much observer bias as possible by providing well-defined procedures for objective measures of explicitly defined stream variables.

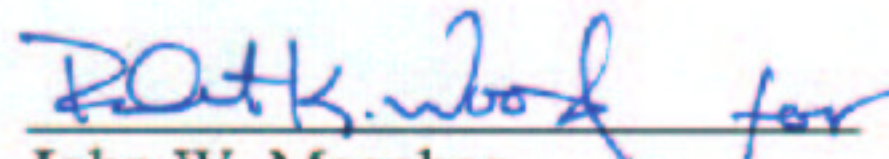
3. Quantitative Methods: The assessment procedure should utilize quantitative measures of stream variables to the maximum extent practicable.
4. Fluvial Geomorphological Emphasis: Stream assessments undertaken to prioritize watersheds or stream reaches for management or evaluate the design of stream mitigation projects (e.g., stream enhancement or restoration) should be based on fluvial geomorphic principles.
5. Data Management: The assessment procedure should utilize available stream data to the maximum extent practicable. Many state agencies maintain databases for ambient monitoring and designated use allocations. Such data should be effectively utilized as it is useful for calibrating stream quality indices, understanding local reference conditions, and developing performance standards to evaluate stream restoration and enhancement efforts.

In its review of 51 selected complete or draft stream assessment protocols, the Stream Mitigation Compendium highlights examples of existing stream assessment/mitigation protocols that include these characteristics and may serve as sound models for other regions of the United States.

We encourage you to use this technical resource document to improve the scientific foundation for compensatory mitigation decisions, and to make its availability known to the mitigation planning and design community and to agencies with which we cooperate in decisions affecting stream resources. We are grateful to the Federal Interagency Mitigation Workgroup, including staff from the Departments of Agriculture, Commerce, Interior, and Transportation, in addition to our members, for their important work to improve the regulatory program and to achieve better environmental outcomes. Thanks also to all who submitted information for the compendium and who provided insights and comments as it was developed.



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