



U.S. Department
of Transportation

**Federal Highway
Administration**

Memorandum

Subject **INFORMATION:** Wetland Delineation
and Mitigation

Date April 19, 1994

From Director, Office of Environment
and Planning

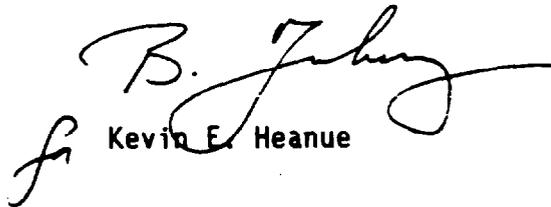
Reply to
Attn of HEP-42

To Regional Administrators
Federal Lands Highway Program Administrator

Attached for your information are background papers on three major areas of concern in the areas of wetland delineation and mitigation. Please feel free to share these with State highway agencies and metropolitan planning organizations, as they should prove quite informative to them as well.

The first paper addresses the factors involved in determining the amount of monitoring needed at a mitigation site. The second paper discusses a wetland delineation issue, specifically the Memorandum of Agreement between the Soil Conservation Service, Corps of Engineers (COE), and Environmental Protection Agency. The third paper describes the COE Wetland Delineation Certification Program.

I hope that these background papers prove helpful, and if we may be of further assistance in this area please feel free to contact Mr. Paul Garrett, of the Environmental Analysis Division, at (202) 366-2067.


Kevin E. Heanue

3 Attachments

FHWA:NBowles/PGarrett:nb:x69173:4/7/94
Revised:CBurbank:nb:x66221:4/12/94
Disk: Paul's, Filename:ASHTOWET.MEM
cc: HEP-40, HEP-41, HEP-30, HEP-31,
HEP-32, Dave Clawson(AASHTO),
HEP-42(SElinsky), HEP-42(PGarrett),
HEP-42(2/Files)



SUBJECT: Information on Major Wetland Issues
March 25, 1994
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Wetland Mitigation Site Monitoring

Monitoring of wetland mitigation sites with herbaceous vegetation (such as wet meadows, marshes, fringe wetlands along lake shores or estuaries) for 3 to 5 years is normally sufficient to determine success of the project. If the mitigation site involves woody vegetation plantings (shrubs, trees, etc.), a longer monitoring period should be expected (5 to 10 years, for shrubs or small trees; longer for forested vegetation types, which may take many years to become established). Monitoring should be seasonal (two, three, or four seasons per year) depending on the regional climate, climatic cycles (droughts, freezes, floods), and functional objectives of the wetland. Data collected should include information on functional indices relative to vegetation, hydrology, and soils.

Easily observed indices of site condition and performance, such as plant height, plant density (number per unit area), plant canopy coverage, diameter breast height of trees, plant species occurrence and distribution on the site, water depth, duration of inundation or saturation, depth of soil saturation, and soil profile, could all be used as monitoring parameters.

If specific water quality functional objectives have been established or emphasized, it may be desirable to periodically monitor some basic parameters of water quality and water quality improvement, such as biochemical oxygen demand, suspended solids, total suspended phosphorus or nitrogen concentrations, pH, dissolved oxygen, temperature, conductivity, total coliforms, dissolved metals, or oil/grease. An intense, detailed level of monitoring should be the exception rather than the rule. There should be no real need to monitor wetlands during seasons or periods when the wetland is not expected to function.

Data collection on woody vegetation may be limited to once or twice a year in most cases, to document survival and growth. Monitoring at the start and end of the growing season will facilitate and speed up needed corrective actions, such as replacement of plantings, where necessary, and may prevent the loss of a growing season in obtaining a mature vegetative cover. More frequent monitoring may be necessary in cases where animal damage (such as browsing by deer, grazing by geese, girdling by rodents, or cutting by beaver) is expected or common, or where special measures (such as seasonal irrigation) are necessary to establish a successful mitigation site.

Monitoring schemes more detailed than this may be desirable where detailed performance and condition data are wanted or necessary to evaluate relationships between environmental conditions and wetlands performance or functions. An example is physicochemical conditions in the soils or substrate versus rates of plant growth or water quality processes. This sort of data is more properly the pursuit of a research project, not a strict monitoring activity. In some cases, particularly when a mitigation project is not

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Delineation Memorandum of Agreement (MOA) between the Soil Conservation Service (SCS), Corps of Engineers (COE), and Environmental Protection Agency (EPA).

An MOA on wetlands delineation signed into effect January 9, 1994, establishes the SCS as the agency responsible for delineating wetlands which are located on, or are surrounded by, agricultural lands. Agricultural lands are to be defined according to criteria in the Food Security Act Manual. These wetlands are primarily "prior converted croplands" and "farmed" wetlands, but also include wetland "remainders," small pockets of natural, vegetated wetlands which have been isolated or surrounded by cultivation or agricultural practices.

Farmed wetlands are areas that were placed under cultivation after the passage of the Food Security Act. Farmed wetlands are regulated under Section 404, if they are not being actively cultivated, or if used for purposes for other than agriculture. This means that a Section 404 permit application must be filed for placement of fill in areas identified as farmed wetlands. Prior converted croplands are areas of wetland which were converted to agricultural production prior to passage of the Food Security Act, and are not regulated under Section 404. A Section 404 permit is not required for placement of fill on prior converted cropland. Wetlands in agricultural areas still having natural vegetation and characteristics (uncultivated) are subject to regulation under Section 404.

This means that the SCS will expand its responsibilities to include delineation of wetlands according to the 1987 COE Wetland Delineation Manual, as well as wetlands identified and administered under the Food Security Act Manual. The SCS will approve delineations of Section 404 jurisdictional wetlands (farmed wetlands, natural vegetated wetlands) on farms for applicants prior to submission of a Section 404 permit application. The appropriate point of contact for delineation review and approval by SCS is the local SCS office (County Agent). The COE regulatory branch will accept SCS approvals on such applications.

State highway agencies should contact State SCS headquarters to establish procedures for review of delineations of wetlands in agricultural areas for 404 permit applications submitted after January 9. Actual review of delineations will be performed by County Agents or their representatives. State highway agencies normally perform or contract wetland delineations for projects involving wetlands impacts.

Delineation and identification of prior converted cropland and farmed wetlands required for highway project planning and development should be provided by SCS field offices on request, since such delineations for most areas have already been made. The SCS is now working with the COE to train SCS field agents to use the 1987 delineation manual. Until this training is complete,

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Wetland Delineation Certification Program

Although the program has not been fully established, the Corps of Engineers (COE) is moving ahead with the certification of wetland delineators. Pilot testing and certification of delineators has been implemented in the Seattle, Washington; Jacksonville, Florida; and Baltimore, Maryland COE Districts. The COE expects to implement the program nationwide in the fall. Prior to nationwide implementation, COE must publish the final rulemaking notice in the *Federal Register*, expected to occur about July. In addition the COE must complete training of its own personnel to certification standards, and establish testing procedures and points of contact for review and approval of delineations performed by certified delineators.

Certification is not required to perform and submit delineations, but is expected to facilitate and speed up the permit review and approval process by eliminating or reducing the need for COE regulatory personnel to field check delineations.

Certification will be obtained by passing a two-part regional examination administered by the COE District or Division Offices on the 1987 COE delineation manual and field application of delineation criteria. The examination will consist of both written and practical sections. The written exam will require written interpretation of the three parameter test (vegetation, soils, and hydrology) for identification of wetlands according to guidelines given in the 1987 manual. The practical section will require accurate identification and delineation of wetlands in the field. Certification will be required in each COE district where delineations will be made. Some States will need to use delineators with multiple certifications or several certified delineators to facilitate project review and approval. There has been no discussion to date of reciprocity between COE jurisdictions. The COE intends to make the certification testing procedure as consistent as possible nationwide, taking into account local variations in classification of vegetation and soil types.

The COE has a delineation training program in existence as the Regulatory IV - Interagency Wetland Identification Course. This course includes material on both the 1987 Manual and the Food Security Act manual. Sections offered in 1994 are reserved for COE and Soil Conservation Service (SCS) personnel. The SCS field agents are now required to delineate wetlands according to the COE 1987 manual, due to the new SCS/COE/Environmental Protection Agency Memorandum of Agreement of wetland delineation, in addition to delineating agricultural wetlands (prior converted cropland and farmed wetlands) according to the Food Security Manual. This has added to the training load of the COE.

Training for wetland ecologists and others doing delineations on highway projects is being provided primarily by private sector consultants and training specialists, or by academic institutions under special training programs or on contract with highway agencies. Among others, Virginia has