

ENVIRONMENTAL ASSESSMENT AND
FINDING OF NO SIGNIFICANT IMPACT
FOR THE GREAT PLAINS REGIONAL SUPPLEMENT
TO THE 1987 WETLAND DELINEATION MANUAL

Purpose and Need

The purpose and need for this supplement to the 1987 Manual is to use the best available scientific and technical information for improving precision in delineating upland/wetland boundaries in the Great Plains for purposes of Section 404 of the Clean Water Act and provide a procedure for continual future updates as more data are gathered and analyzed.

Background

The U.S. Army Corps of Engineers Wetland Delineation Manual was published in 1987 (Environmental Laboratory, 1987) and identified a three-parameter approach to delineating wetlands – hydric soils, wetland hydrology and hydrophytic plants. Use of this manual for wetland delineation by Corps Districts has been mandatory since 1991.

Since the manual was first published, the U.S. Fish & Wildlife Service (FWS) proposed updating the 1988 National Plant List and the Natural Resources Conservation Service (NRCS) has published newer versions of the “Hydric Soils of the United States”. In addition, wetland science has advanced the understanding of the processes (e.g., biochemical) in these systems.

In 1993, the U.S. Congress requested that the Environmental Protection Agency (EPA) ask the National Academy of Sciences, National Research Council (NRC) to create a committee to study the scientific basis for the characterization of wetlands. The committee was asked to review and evaluate the consequences of alternative methods for wetland delineation and to summarize the scientific understanding of wetland functions (National Research Council, 1995). One of the recommendations of this committee was to develop regional supplements to the 1987 Manual and that the regions should be defined on the basis of physiography, climate, vegetation and prevailing land use and should be used by all agencies for wetland characteristics.

The Corps Engineer Research and Development Center (ERDC) was asked to identify and discuss the technical issues relevant to regionalization of the manual (Wakeley, 2002). The Corps, as the lead Federal agency and author of the 1987 Manual, invited the other three Federal agencies that assess wetlands (EPA, NRCS and FWS) to participate in the development of regional supplements, as recommended by the NRC. A National Advisory Team consisting of representatives of all four Federal agencies was created to oversee the regional supplements to provide quality control, consistency on national issues and decisions regarding the timing and defining of “regions”. This regional supplement was developed by a Regional Working Group consisting of experts from Federal/state/local agencies and academia. The availability of the draft supplement was announced through the Corps public notice process for public comment and field-testing, and underwent an independent peer review as discussed below. When

finalized, the interim supplement will be implemented with additional field-testing for one year before a final version of the supplement is published by ERDC.

This document discusses the factors considered by the Corps during the development process for the Great Plains Regional Supplement. This Environmental Assessment/Finding of No Significant Impact contains: (1) a discussion of the environmental consequences necessary to comply with the National Environmental Policy Act, and (2) creation of an independent peer review, their report and the Corps response to their comments as required by the Office of Management and Budget (2004).

Alternatives

We considered three alternative methods with respect to the 1987 Manual. The No Action Alternative would result in the continued use of 1987 Manual without scientific or technical changes. The preferred alternative would be to develop regional supplements that identify a regionally tailored list of indicators appropriate for that ecological region, include more helpful local photographs and descriptions and more detailed guidance on problem areas. The third alternative considered was to update and republish the 1987 Manual.

Affected Environment

This supplement is applicable to the Great Plains Region, which consists of all or significant portions of eleven states: Colorado, Kansas, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. The region encompasses a wide variety of landforms and ecosystems, but is differentiated from surrounding areas mainly by its relatively low level of topographic relief, semi-arid climate, dominance of grasslands and paucity of forests (Bailey 1995; Commission for Environmental Cooperation (CEC) 1997).

The Great Plains is a region of flat to rolling topography extending from the foothills of the Rocky Mountains on the west to the often indistinct transition to more humid environments in the east. Across much of the plains, annual precipitation is less than potential evapotranspiration, resulting in moisture deficits and a semi-arid climate (Bailey 1995). Due to limited rainfall, groundwater recharge and discharge occur mainly in depressions, and water tables are usually mounded beneath depressions and drainages. This is in contrast to humid eastern landscapes, where considerable groundwater recharge occurs in uplands, wetlands are often discharge systems, and the water table is a muted reflection of surface topography (Richardson, Arndt, and Montgomery 2001).

The Great Plains Region is composed of five subregions that differ sufficient from each other in climate, landforms, biogeography, and/or wetland characteristics to warrant separate consideration of wetland indicators and delineation guidance: Northern Great Plains (corresponds to Land Resource Region F), Western Great Plains (LRR G), Central Great Plains (LRR H), Southwest Plateaus and Plains (LRR I) and Southwestern Prairies (LRR J).

Most of the wetland indicators presented in this supplement are applicable through the entire Great Plains Region, however, some indicators are restricted to specific subregions or smaller regions (i.e., Major Land Resource Areas) (USDA Natural Resources Conservation Service 2006). Specifically, those portions above the lower elevational limit of the ponderosa pine (*Pinus ponderosa*) zone, including interspersed meadows, shrublands, and riparian areas, are addressed in the Western Mountains, Valleys and Coast Regional supplement (U.S. Army Corps of Engineers, 2008).

Region and subregion boundaries are depicted as sharp lines, however, climatic conditions and the physical and biological characteristics of landscapes do not change abruptly at the boundaries. In reality, regions and subregions often grade into one another in broad transition zones that may be tens or hundreds of miles wide. The lists of wetland indicators presented in these regional supplements may differ between adjoining regions or subregions. In transitional areas, the investigator must use experience and good judgment to select the supplement and indicators that are appropriate to the site based on its physical and biological characteristics. Wetland boundaries are not likely to differ between two supplements in transitional areas, but one supplement may provide more detailed treatment of certain problem situations encountered on the site.

The identification of the upland/wetland boundary can be difficult since this is, by definition, a transition area between land and water. When completing a wetland delineation, the collection of hydrology, hydric soils and hydrophytic plant data may not always occur at the optimal time of the year to identify clear indicators. Local conditions (wet or dry climate cycles, fire, grazing, heavy or light snow packs) must be considered. Once an upland/wetland boundary has been identified, the question of Section 404 jurisdiction based on hydrologic connections to other waters of the U.S. must be determined and is a separate policy issue not addressed in this supplement

Environmental Consequences

The No Action alternative would not achieve one of the goals of the Corps, which is to use the best scientific/technical information available in the Clean Water Act Section 404 program or the purpose and need of this project. The No Action alternative would result in continued heavy use of the “problem areas” section of the manual without additional science-based guidance. Although the 1987 Manual is updated to incorporate some other technical information such as use of updated National Plant Lists and the Natural Resources Conservation Service Field Indicators of Hydric Soils, newer information such as alternative procedures for calculating plant dominance may not be used consistently. Use of the 1987 Manual with no changes would result in continued confusion and lack of clarity, predictability, precision and consistency in the region. No changes to wetland delineation methods or boundary lines would occur with this alternative.

The preferred alternative, to develop regional supplements to the 1987 Manual using the best available scientific data, is expected to result in more consistent, science-based upland/wetland boundary determinations by Federal, tribal, state and local government delineators as well as

thorough testing of the draft supplement to determine whether any spatial changes in wetland boundaries would result from its use by the Corps.

We agree. Interagency field tests are being conducted in several areas of the Great Plains. In addition, we will continue to accept field testing results after the interim supplement is published and implemented for a one-year interim period. The supplement does not change the basic wetland definition or concepts given in the 1987 Manual, and is not expected to either expand or contract Clean Water Act regulatory jurisdiction.

The U.S. Environmental Protection Agency: Although EPA has been a partner in the regionalization process and is represented on the Great Plains Working Group, they provided additional written comments and concerns. They suggest that the supplement be limited to “problem area wetlands” and not address changes to wetland indicators. EPA expressed concerns about the 14-day hydrologic standard in place of the 5% of the growing season used in the 1987 Manual and the 7-day standard for flooded or ponded hydric soils. EPA also expressed the need for thorough interagency field testing of the supplement, and the Corps agrees. EPA also suggested that the Corps retain the existing 1987 Manual procedures as the default for regulatory purposes during the one-year interim implementation period and perform side-by-side comparisons with the new supplement on all wetland determinations.

EPA recommended that part of the requirements for NTCHS hydric soil indicators be dropped, specifically the requirement that “Unless otherwise indicated, all mineral layers above any of the indicators must have a dominant chroma of 2 or less, or the layer(s) with dominant chroma of more than 2 must be less than 6 in. (15 cm) thick to meet any hydric soil indicator.” The Corps intends to adopt the NTCHS indicators and to work with NTCHS on any problems. EPA has not provided any specific evidence of a problem beyond a general concern. Any problems with NTCHS indicators should be addressed through NTCHS procedures. EPA is concerned about the 14-day hydrologic standard given in the supplement in relation to what they claim are some highly ephemeral wetlands in the Great Plains that may be wet for as little as 7 days. EPA also proposed that “Listed on the Hydric Soils List” continue to be used as a hydric soil indicator, but this suggestion was rejected by the working group in favor of field indicators. EPA’s suggestion that the Map Unit Name be retained on the field data form was accepted. EPA also suggested that a procedure be developed for future revisions to the supplement as new scientific information becomes available.

The suggestion that the supplement be limited to “problem area wetlands” was rejected by the working group and the National Advisory Team early in this process because it would not result in significant “regionalization” or updating of the 1987 Manual.

In regards to the 14 day standard for wetland hydrology, the Corps is implementing the 14-day standard, in the absence of any alternative hydrologic standard developed for a region or for a specific wetland type, based on the recommendations and technical authority of the National Academy of Sciences. EPA should be aware that, under the original 1987 Manual, the hydrologic standard for wetlands was approximately 10-18 days in Region 6 (5% of the growing

season), and not as little as 7 days. In any case, if these ephemeral wetlands exhibit indicators of all three wetland factors, they would be identified as wetlands no matter what their natural hydrologic regime. The hydrology technical standard would only be used in highly disturbed or problematic situations where indicators were lacking.

As mentioned in the response above, some testing is occurring under the leadership of Corps Districts in the region and will continue during the one year test period. The Corps welcomes the EPA's participation on these testing teams, and will welcome any testing results that the EPA produces under its own separate initiatives.

The supplement, although not giving details of a procedure to continue to update the regional supplements, states that the interagency National Advisory Team for Wetland Delineation shall be the body charged with receiving and acting upon any proposals for changes to wetland-delineation procedures. Currently, EPA has two representatives on this interagency team.

The Peoria Tribe of Indians of Oklahoma: The Tribe's concern was with any proposed changes that would fall under the Native American Graves Protection and Repatriation Act (NAGPRA).

Application of the regional supplement will have no effect on NAGPRA concerns. We continue to encourage tribal participation in the development of all of the regional supplements.

Northern Great Plains Working Group. This letter supported the adoption of the regional supplement; suggested referencing the "most current version" of the NRCS field indicators of hydric soils in the United States; and suggested using the National Wetland Inventory (NWI) maps as a primary hydrology indicator.

We agree and will make the change referencing the most current version of the NRCS field indicators. Members of the working group had mixed feelings about the utility of NWI maps for detailed wetland delineation. We think most would agree that NWI maps are a valuable resource but, due to mapping scale, the age of some maps and other issues, are not sufficiently site-specific to serve as hydrology indicators for wetland boundary determinations. They will continue to be used as a resource for making wetland determinations in disturbed and problematic situations.

State of Louisiana department of Wildlife and Fisheries. The agency had no comment on the draft document but indicated an interest in evaluating and comparing the outcome of the field testing protocols between the supplement and the 1987 manual and a desire to review and comment on any future proposed changes in wetland delineation and wetland determination techniques.

This supplement does not extend into the state of Louisiana, however, representatives of this agency are more than welcome to participate in the Atlantic and Gulf Coast Plains supplement which includes the entire state.

Larry Gremminger. This commenter suggested that the Great Plains region is too diverse to be included in one supplement.

While we agree that there is a diversity of ecosystems within this region, the development of the draft and interim documents by a regional working group with experience from the entire area did not identify a large number of indicators that were significantly different. Those indicators that had some identifiable differences were discussed by subregion.

Independent Peer Review:

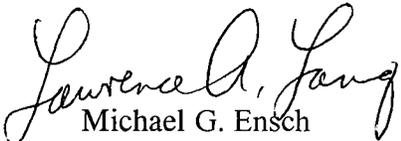
The purpose of the Office of Management and Budget Information Quality Guidelines (2004) is to enhance the quality and credibility of the government's scientific information, recognizing that different types of peer review are appropriate for different types of information. A copy may be obtained at http://www.whitehouse.gov/omb/inforeg/peer2004/peer_bulletin.pdf. The Federal agencies were granted broad discretion to weigh the benefits and costs of using a particular peer review mechanism; however, agencies strive to ensure that their peer review practices are characterized by both scientific and process integrity. Peer review is one of the important procedures used to ensure that the quality of published information meets the standards of the scientific and technical community and involves the review of a draft product for quality by specialists in the field who were not involved in producing the draft. The peer review report is an evaluation or critique that is used by the authors of draft information that contains important scientific determinations to improve the product. The selection of participants in a peer review is based on expertise, with due consideration of independence and conflict of interest. In some cases, reviewers might recommend major changes to the draft, such as refinement of hypotheses, modifications of data collection or analysis methods, or alternative conclusions. However, the peer review does not always lead to specific modifications in the draft product. In some cases, the authors do not concur with changes suggested by one or more reviewers.

A peer review is considered completed once the agency considers and addresses the reviewers' comments and incorporated where relevant and valid. In cases where there is a public panel, the agency publishes the peer review report(s) and the agency's response to the peer review comments. Agencies prepare a written response to the peer review report explaining: the agency's agreement or disagreement, the actions the agency has undertaken or will undertake in response to the report, and (if applicable) the reasons the agency believes those actions satisfy and key concerns or recommendations in the report. A copy of the peer review report, including the responses to the comments, is included as an attachment to this document.

Finding of No Significant Impact:

In compliance with the National Environmental Policy Act (NEPA) and its implementing regulations at 40 CFR parts 1500 – 1508, an Environmental Assessment has been prepared for this rule. The Corps prepares appropriate NEPA documentation, including Environmental Impact Statements when required, for all permit decisions. The environmental review process undertaken for this rule has led me to conclude that the publication of this supplement will not

have a significant effect on the human environment, and therefore an Environmental Impact Statement is not required by §102(2)(C) of NEPA or its implementing regulations. A copy of this Environmental Assessment with attachments is available from the U.S. Army Corps of Engineers, HQUSACE, Operations and Regulatory Community of Practice, 441 G Street, NW, Washington, DC, 20314-1000 and on the Regulatory Homepage at http://www.usace.army.mil/inet/functions/cw/cecwo/reg/reg_supp.htm.

for 
Michael G. Ensched
Chief, Operations
Directorate of Civil Works

Literature Cited

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Public Notice

**U.S. Army Corps
Of Engineers
Galveston District**

Date Issued:
Suspense Date:

Regional Supplement

27 September 2006

29 November 2006

**REQUEST FOR PUBLIC INPUT ON PROPOSED WETLAND INDICATORS AND
DATA COLLECTION PROCEDURES
FOR
DRAFT GREAT PLAINS REGIONAL SUPPLEMENT TO THE 1987 WETLAND
DELINEATION MANUAL**

The U.S. Army Corps of Engineers, Galveston District, announces the availability of the Draft Great Plains Regional Supplement to the 1987 Wetland Delineation Manual (Environmental Laboratory 1987). This draft regional supplement was developed by wetland delineation experts from state and Federal agencies and academia with experience within the region. It is being peer-reviewed by an independent panel of scientists and practitioners (report is available upon request). This draft is also being field tested by interagency teams of state and Federal scientists to assess its clarity and ease of use, and to determine whether use of this supplement will result in any spatial changes in wetland jurisdiction for Clean Water Act Section 404 purposes. The draft is available at http://www.usace.army.mil/inet/functions/cw/cecwo/reg/reg_supp.htm.

We are specifically seeking public input, including additional scientific information or data, on the proposed indicators of wetland hydrology, hydric soils, and hydrophytic vegetation and data collection procedures in this draft document. Commenters may wish to field test this supplement as part of their evaluation and comments. If so, the protocol for field testing must include the use of (1) the 1987 Wetland Delineation Manual with current guidance, and (2) the 1987 Manual with this draft regional supplement on the same sampling points (see attached). A minimum of two points must be documented, one in the lower (wetland) community and one in the adjacent higher (upland) community. Commenters should include data recorded on both the current 1992 data forms and the proposed data forms from the Regional Supplement, maps indicating the location of the field site and data collection points (upland and wetland), and a completed questionnaire (see attached) for each delineation.

Comments may be submitted by the above due date to Ms. Katherine Trott (CECW-LRD), U.S. Army Corps of Engineers, 441 G Street NW, Washington, D.C. 20314-1000 or by e-mail to 1987Manual@usace.army.mil. Another public notice will be issued by this district announcing the publication of the final document and the implementation date of this supplement.

Reference: Environmental Laboratory (1987) "Corps of Engineers Wetlands Delineation Manual", Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS. (<http://el.erdc.usace.army.mil/wetlands/pdfs/wlman87.pdf>)



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services
9014 East 21st Street
Tulsa, Oklahoma 74129
918/581-7458 / (FAX) 918/581-7467



In Reply Refer To:
FWS/R2/OKES/
2007-FA-0007

November 27, 2006

RECEIVED

NOV 29 2006

REGULATORY

District Engineer
U.S. Army Corps of Engineers
Attn: Regulatory Section
1645 South 101st East Avenue
Tulsa, Oklahoma 74128-4609

Dear Sir:

The U. S. Fish and Wildlife Service (Service) has reviewed the September 29, 2006, Public Notice that announced the availability of the draft Great Plains Regional Supplement to the 1987 Wetland Delineation Manual (Corps Manual). The existing Corps Manual provides guidance for identifying and delineating wetlands from a national perspective. Regional differences in factors important in the identification and delineation of wetlands cannot always be adequately considered when using the national manual. The Regional Supplement was developed by wetland delineation experts from state and federal agencies and academia with experience in the Great Plains Region as part of a nationwide effort to address regional wetland characteristics. This effort follows recommendations by the National Academy of Sciences to increase the sensitivity of wetland delineation methods on a regional basis. The Regional Supplement is designed for use with the Corps Manual and would be used to identify wetlands for a variety of purposes including the identification of wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act, the development of management plans, and resource inventories. The Regional Supplement would take precedence over the Corps Manual where differences in the two documents occur.

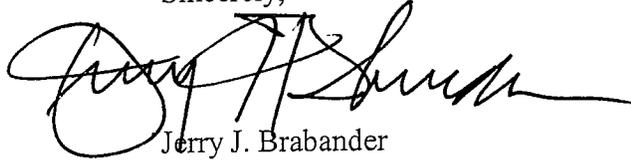
The District Offices of the Corps are coordinating and overseeing field testing of the draft Regional Supplement. The Service believes field testing is imperative to determine whether the use of the Regional Supplement would result in any spatial changes to wetland boundaries. We believe consideration of the results of the field testing effort would be highly appropriate prior to use of the Regional Supplement for regulatory and other purposes.

Field testing of the Regional Supplement in Oklahoma will not have occurred before the expiration date for comments on the draft Regional Supplement. The Service requests an additional opportunity to provide comments after the Regional Supplement has been field tested in Oklahoma and the results of the field testing have been documented and made available for review. We understand that the Regional Supplement also is being peer reviewed by an

independent panel of scientists and practitioners and that the report from this undertaking is available upon request. We also request a copy of this report.

We appreciate the opportunity to provide comments. Please refer to our consultation number 2007-FA-0007 in all future correspondence. If you have any questions or need further assistance with this project, please contact Richard Stark at 918-581-7458, extension 240.

Sincerely,

A handwritten signature in black ink, appearing to read "Jerry J. Brabander". The signature is fluid and cursive, with a large initial "J" and "B".

Jerry J. Brabander
Field Supervisor

cc: Director, ODWC, Oklahoma City, OK (Attn: Natural Resources Section)
Director, Oklahoma Department of Environmental Quality, Oklahoma City, OK
(Attn: Water Quality Programs Division 0207)
Regional Administrator, EPA, (Attn.: 6WQ-EM, Dallas, TX)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

NOV 21 2006

Ms. Katherine Trott
CECW-LRD
U.S. Army Corps of Engineers
441 G. Street, NW
Washington, DC 20314-1000

Dear Ms. Trott:

EPA Region 6 has reviewed the Public Notice for the Draft Great Plains Regional Supplement to the 1987 Wetland Delineation Manual and have the following comments:

General Comments:

- As you know, Region 6 remains very concerned with the method that the Corps' is proposing to regionalize the 1987 manual with regional supplements. We understand the Corps' would publish numerous (8-12) regional, stand-alone supplements across the Land Resource Regions of the United States. As proposed, each supplement would supercede the 1987 manual for all (3) three wetland delineation factors: soils, hydrology, and vegetation. We continue to recommend that the effort be focused only on Section G, Problem Areas, of the 1987 Corps of Engineers Wetlands Delineation Manual.
- For example, there is no utility in developing new indicators for Histosols or other well documented wetland factor indicators.
- As proposed, within EPA Region 6, the Corps would publish (6) six stand-alone regional supplements. We are concerned that overlapping mandatory-use supplements would create confusion among public and private delineators.
- We recommend the Corps consider publishing one new supplement or amendment to the 1987 manual for "problem wetland areas" within the contiguous United States with regional emphasis. We understand that Alaska and the Pacific Islands may require stand-alone supplements.
- If the Corps elects to proceed with these supplements as proposed, we recommend the Corps conduct coordinated comprehensive and targeted interagency field testing of the proposed supplements prior to release. This would entail interagency development of technical and statistical standards for testing protocol. Interagency teams should include states and other interested stakeholders.

The interagency field testing effort should focus on standards for identified questions regarding application of proposed regional supplement indicators on specific regional wetland types.

- We understand the Corps plans to release these supplements on a one-year interim basis. We recommend that the Corps retain the 1987 manual as the default methodology for regulatory purposes during this one-year testing period. We recommend side by side comparison of the supplements and the 1987 manual be conducted on all permit applications during this one-year interim testing period. The results should be assessed by the National Advisory Team and modifications made to the supplement before implementation.

Specific Comments:

- **In Section 3, Hydric Soil Indicators, All Soils, 2nd paragraph, it states that “Unless otherwise indicated, all mineral layers above any of the indicators, must have a dominant chroma of 2 or less, or the layer(s) with dominant chroma of more than 2 must be less than 6 inches (15cm) thick to meet any hydric soil indicator.**

We understand this requirement was written to insure that a continuous water table is present throughout the growing season.

In our field experience in the Great Plains Region, we have found that many wetlands have highly variable and seasonal hydrology and the upper part of some of these soils typically have dominant chromas that are higher than 2 but are reduced to below 2 within the upper 12 inch soil profile. We are specifically concerned that the requirement mentioned above would create a whole new set of problem soils that do not presently exist under the 1987 wetland delineation manual. Therefore, we recommend that the above-mentioned requirement be omitted from any Great Plains Regional Supplement.

- **In Section 5, Difficult Wetland Situations in the Great Plains, Problematic Hydric Soils, Procedure, #4e. adds a condition that soils should be considered hydric if they are ponded or flooded, or the water table is less than or equal to 12 in. (30 cm) from the surface, for greater than or equal to 14 consecutive days during the growing season in most years (greater than or equal to 50 percent probability) using gauge data, water-table monitoring data, or repeated direct hydrologic observations.**

The criteria for hydric soils in the 1987 manual states that the area must be saturated, flooded, or ponded for 7 consecutive days to be hydric. We recommend that the Great Plains manual maintain 7 days as the standard because of the extremely ephemeral nature of many seasonal wetlands in the Great Plains, and to not reduce the boundary of wetlands in the Great Plains that currently exist under the 1987 manual.

- In Appendix C (Wetland Determination Data Form), under Soil, it is proposed to eliminate space for Map Unit Name, Taxonomy, Drainage Class, and, (under Hydric Soil Indicators) “Listed on Hydric Soils List”.

We recommend these be retained because this information helps to corroborate findings in the actual soil profile description.

- **In Section 5, Difficult Wetland Situations in the Great Plains, Wetlands That Periodically Lack Indicators of Wetland Hydrology, Procedure #3g the hydrology standard calls for greater than or equal to 14 consecutive days of flooding, ponding, or a water table less than or equal to 12 in. (30 cm) below the soil surface during the growing season at a minimum frequency of 5 years in 10.**

We recommend that the Great Plains manual maintain greater than or equal to 7 days as the hydrology standard because of the extremely ephemeral nature of many seasonal wetlands in the Great Plains, and to not reduce the boundary of wetlands in the Great Plains that currently exist under the 1987 manual.

- We recommend a workable process be established whereby the Great Plains Manual can be efficiently modified as new scientific information becomes available.
- We look forward to participating in field testing of the Draft Great Plains Supplement to the 1987 Corps of Engineers Wetland Delineation Manual.

Thank you for the opportunity to comment on the draft document and participate in the process. If you have any questions regarding these comments please call Jim Herrington at 254-774-6042.

Sincerely yours,

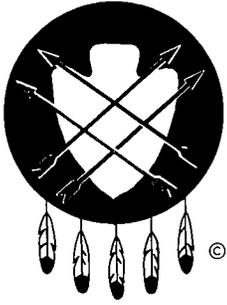


Sharon Fancy Parrish

Chief

Marine & Wetlands Section (6WQ-EM)

cc: EPA Wetlands Division, Washington, D.C.
John Wong, Galveston District, COE
David Madden, Fort Worth District, COE
Andy Commer, Tulsa District, COE
Jim Wood, Albuquerque District, COE



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MIAMI, OKLAHOMA 74355

CHIEF
John P. Froman

SECOND CHIEF
Jason Dollarhide

October 4, 2006

U.S. Army Corps of Engineers
Attn: Regulatory Program
441 G Street NW
Washington, D.C. 20314-1000

RE: Wetland Delineation Manual Great Plains Supplement Public Notice No.

Thank you for notice of the referenced project. The Peoria Tribe of Indians of Oklahoma is currently unaware of any documentation directly linking Indian Religious Sites to the proposed construction. In the event any items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) are discovered during construction, the Peoria Tribe request notification and further consultation.

The Peoria Tribe has no objection to the proposed construction. However, if any human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, the construction should stop immediately, and the appropriate persons, including state and tribal NAGPRA representatives contacted.

A handwritten signature in black ink, appearing to read 'JPL', is written over a horizontal line.

John P. Froman
Chief

xc: Bud Ellis, Repatriation/NAGPRA Committee Chairman

TREASURER
John Sharp

SECRETARY
Hank Downum

FIRST COUNCILMAN
Claude Landers

SECOND COUNCILMAN
Jenny Rampey

THIRD COUNCILMAN
Alan Goforth



Northern Great Plains Working Group

November 15, 2006

Ms. Katherine Trott (CECW-LRD)
U.S. Army Corps of Engineers
441 G. Street, NW
Washington, DC 20314-1000

RE: Comments on the Great Plains regional supplement to the 1987 COE wetland delineation manual

Dear Ms. Trott:

The Northern Great Plains Working Group (NGPWG) is a coalition of several organizations and agencies committed to the continuance of wildlife benefits in the Farm Bill and associated programs in the Dakotas and Montana. We are particularly interested in the Prairie Pothole Region and its unique wetlands. We appreciate the opportunity to provide you with a few brief comments on the draft Great Plains regional supplement to the 1987 COE wetland delineation manual. The following three comments are offered for your consideration. The first comment is a broad endorsement of the Great Plains regional supplement, while the final two comments relate to specific wetland delineation techniques.

(1) We fully support adoption of the Great Plains regional supplement.

There has been nearly two decades of advances in wetland science since the base language of the 1987 COE wetland delineation manual was adopted. During this time a wide variety of disciplines have contributed to a better understanding of wetland hydrology, hydrophytic plants and hydric soils. A common theme has been the need to develop techniques and procedures that account for regional differences in wetland characteristics and types. The draft Great Plains regional supplement makes great strides towards acknowledging the unique nature of prairie pothole wetlands and adopts recent advances in wetland science as a basis for wetland delineations and determinations. We applaud these efforts. The changes forwarded in the Great Plains regional supplement will increase both the precision and accuracy of future wetland delineations and determinations.

The Northern Great Plains Working Group is a local coalition of organizations and agencies committed to the continuance of the wildlife benefits of Farm Bill initiatives in the Dakotas and Montana. The group includes representatives of Ducks Unlimited, Inc., Delta Waterfowl Foundation, Pheasants Forever, Audubon Society, Central Flyway Council, North Dakota Natural Resources Trust, Northern Great Plains Joint Venture, North Dakota Game and Fish Department, South Dakota Game, Fish and Parks, the North Dakota Chapter of The Wildlife Society, and representatives of the U.S. Fish and Wildlife Service who provide wildlife and habitat resource data, and consultation relative to Farm Bill statutes, regulations, and programs. The views and positions of the Northern Great Plains Working Group may not represent the official policy of individual organizations and agencies. For more information, please write the Northern Great Plains Working Group, 1605 E. Capitol Ave., Suite 101, Bismarck, ND 58501-2102.

(2) Reference the “most current version” of the NRCS field indicators of hydric soils in the United States. In several locations version 6.0 of the NRCS field indicators of hydric soils in the United States is specified as the basis for hydric soil determinations. This document is certainly the appropriate basis for hydric soil determinations. However, the document is periodically updated, and version 6.0 will ultimately be replaced by future versions as more soil data becomes available. We recommend that the Great Plains regional supplement simply reference the “most current version” of NRCS field indicators of hydric soils in the United States. This will help reduce the need to periodically issue updates to COE wetland manuals and will assure consistency in conducting hydric soil determinations. The most recent version of this document can also be accessed on the internet at the following address:

ftp://ftp-fc.sc.egov.usda.gov/NSSC/Hydric_Soils/FieldIndicators_v6_0.pdf

(3) Utilize National Wetland Inventory (NWI) maps as a primary hydrology indicator.

NWI maps as developed by the United States Department of Interior are a valuable resource for conducting wetland field work. Within the Prairie Pothole Region, NWI maps serve as the basis for many of our biological planning efforts and strategic planning exercises. Countless hours of wetland expertise and ground truthing have contributed to the development of these maps, most of which are now in digital format. As such, we recommend NWI maps warrant standing as a primary hydrology indicator.

Thank you once again for the opportunity to comment. In conclusion, we recommend you move forward with the field implementation of the Great Plains regional supplement. Only by doing so can the best available data be fully utilized to conduct wetland determinations and delineations to the highest possible standards.

Sincerely,

A handwritten signature in black ink, appearing to read "Keith Trego". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Keith Trego
For the Northern Great Plains Working Group



DEC 06 2006

State of LouisianaKATHLEEN BABINEAUX BLANCO
GOVERNOR

DEPARTMENT OF WILDLIFE AND FISHERIES

JANICE A. LANSING
ACTING SECRETARY

November 29, 2006

Mr. Dolan Dunn, Chief
Galveston District
United States Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229RE: *Application: Regional Supplement*
Applicant: U.S. Army Corps of Engineers, Galveston District
Public Notice Date: September 27, 2006

Dear Mr. Dunn:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF), Office of Wildlife, has reviewed the above referenced Public Notice. Based upon this review the following has been determined:

LDWF has no specific comments regarding the Draft Great Plains Regional Supplement to the 1987 Wetland Delineation Manual at this time. However, LDWF is interested in evaluating and comparing the outcome of the field testing protocols between the current wetland determination methodology and the proposed Regional Supplement. LDWF wishes to review and comment on any future proposed changes in wetland delineation and wetland boundary determination techniques.

The Louisiana Department of Wildlife and Fisheries seeks to work with you in a facilitative manner on this and future endeavors. Please do not hesitate to contact Kyle Balkum (225-765-2819) of our Habitat Section should you need further assistance.

Sincerely,

Handwritten signature of Venise Ortego in cursive.

Venise Ortego, Permits Coordinator

c: Kyle Balkum, Biologist Manager



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

AUG 16 2007

Ms. Katherine Trott (CECW-CO)
Army Corps of Engineers
441 G. Street NW
Washington, D.C. 20314-1000

RE: Comments on The Midwest Supplement and the Great Plains Supplement to the 1987 Corps Wetland Delineation Manual

Dear Ms. Trott:

The following comments are in response to the July 15, 2007, Public Notice regarding the Draft Midwest Supplement to the 1987 Corps of Engineers Wetland Delineation Manual. We appreciate the opportunity to provide comments on the Delineation Manual Supplements.

General Comments:

Regionalization and refinement of the 1987 Corps of Engineers Wetland Delineation Manual is a very worthwhile effort. Regionalization of the 1987 Wetland Delineation Manual will offer extremely useful field indicators, provided the information in the Supplements is based on valid scientific data. In that regard, we do have a number of concerns about the proposed revisions to both the Great Plains and the Midwest Supplements and the science that serves as the basis for those revisions.

During meetings for both of the above mentioned Supplements, the Corps stated that the revisions to the Manual and the addition of the Supplements would not reduce the number and acreage of areas that are determined scientifically to be wetlands. We find, however, this is not the case. In fact, we believe that many thousands of acres of wetlands will no longer be defined as wetlands if the Supplements are adopted, as proposed.

An interagency team that includes the Corps of Engineers (the Corps), the Environmental Protection Agency (EPA), the Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, and the Kansas Department of Wildlife and Parks, has been testing the Great Plains Supplement in Kansas and concluded that some wetland types may no longer be determined to be wetlands based on the Manual revisions in the that Supplement. We believe this will be a similar situation in Missouri, Nebraska and Iowa based on revisions to both the hydrology and soil criteria, not only in the Great Plains Supplement, but also the Midwest Supplement.

Specific Comments:

While we believe that refinement of the indicators for each of the three parameters is needed, we also believe that eliminating indicators that have served well over the past two decades, without benefit of thorough testing to understand the ramifications of their elimination, is a not a science-based decision.

Hydrology Criteria:

We are particularly concerned about the removal of Table 5 on page 30 of the 1987 Wetland Delineation Manual and the use of a Technical Standard for Hydrology in Problem Areas. This Technical Standard (TS), we have been told by Jim Wakeley, is based on a 1995 National Academy of Sciences (NAS) study, entitled, "Wetlands: Characteristics and Boundaries." On page 107 the study states that through available data (based solely on two datasets, one in North Dakota and one in North Carolina), "reasonable hydrologic thresholds would include a depth to water table of <1 ft (30 cm) for a continuous period of at least 14 days during the growing season, with a mean interannual frequency of 1 out of 2 years." The study goes on to state that: **"More scientific information is needed especially for areas where saturation itself, rather than anoxia, is responsible for the presence of hydrophytes."** Our concern with the use of this TS is the lack of scientific validity due to the number of sampling sites that serve as a basis for the hydrology criterion. It is this second statement, however, that caveats the sampling data, stating a need for additional scientific study where saturation is the key. It is the need for this additional information that concerns us, as we do not believe that the Technical Standard for Problem Areas is valid for the vast majority of our wetlands with in Region 7. For your information, Region 7 includes the states of Iowa, Kansas, Missouri and Nebraska.

The removal of Table 5 from the 1987 Manual does not provide for any other criteria (not indicators) for hydrology, other than the TS to be used for Problem Areas. As this TS is now the only standard for the hydrology criterion, it becomes the default criterion for all wetlands in terms of frequency and duration. To be consistent and scientifically valid, for instance, one would not use one TS for Problem Areas and a totally different TS for all other wetlands. If a wetland delineation were taken to court, the Problem Area TS would be used as the criterion for hydrology, as no other criterion remains after the removal of Table 5.

Over the years, since the 1987 Manual was tested and then used, the Corps Districts and Region 7 found that using Table 5 provided a valid rationale for the hydrology in our states. Although we understood that when the Manual was written Table 5 was meant to be used for the Mississippi Valley. However, after much discussion and field experience, we also found that it worked well for our states. We have been using five percent of the growing season since the implementation of the Manual because we found that the hydrology coincided with the hydrology of the wetlands within our states, and validated where we have available gauge data. This amounted to between 7 and 11 days of flooding, ponding and/or saturation. To now remove Table 5 and rely on a TS that reduces the number and acreage of areas that can be determined as wetlands, is contrary to what we have been told is the purpose of the Supplements.

Additionally, in the Midwest Supplement, we find that the Problem Area TS for hydrology has now been incorporated into the Gauge Data Indicator, as well as in many other notations in the hydrology and other sections (i.e., pages 53, 80 and 96). Again, this is problematic for the areas we are now determining to be wetlands. There is no gauge data for any major river within Region 7, including the Missouri River, let alone a stream, that would meet this Indicator. This was validated during our testing of the proposed 1991 hydrologic changes that would have required 20 days of inundation.

We do not understand the urgency of using the Problem Area TS when data is so limited in both the Great Plains and the Midwest concerning the frequency and duration of inundation and saturation in most of our wetland types. Both inundation and saturation are part of the wetland definition used by both the Corps and EPA, and should be considered as part of any TS for hydrology. It is also hard to believe that the TS should be applied before the consequences of its application are known. Furthermore, the requirement that any regional changes to the TS must be based on scientific data collected for each wetland type is contrary to the decision made by the Corps to use the TS without benefit of hydrologic data for each wetland type. Because Region 7 has at least 28 wetland types, it would take years of field time and funding to collect data for each of those wetland types.

If this TS for Hydrology for Problem Areas and the Gauge Data Indicator remain in the Supplements, many thousands of acres of wetlands will no longer be determined to be wetlands. EPA Regions 7 and 8, and EPA Headquarters are currently funding a study to evaluate this hydrology criterion so that we can provide more definitive scientific evidence about the TS. The study is being conducted in areas that will utilize either the Great Plains or the Midwest Supplements. As the study is being conducted during one growing season, we have arranged with USGS to “normalize” the data that is collected based on information about soils, precipitation, saturation and inundation.

One example of an area where we believe wetlands will be lost is Lake of the Ozarks. Gauge data at Lake of the Ozarks shows inundation for about 9 days. This lake has both fringe wetlands and wetlands in the headwaters of coves around a 1,125 mile shoreline. Research has shown that these wetlands are the spawning areas for the vast majority of sport fish in the lake. Fishing, which includes major tournaments, is not only a huge draw for tourism in the state, but also of vital importance to the state economy. Yet, these fringe and headwater of cove areas will no longer be delineated as wetlands, as gauge data was the primary hydrology tool used for the determination of not only hydrology, but hydric soils (based on the definition of hydric soils – soils that have a peri-aquic moisture regime).

Because the definition of the growing season is also proposed for revision, the use of Table 5 along with the revised growing season definition would extend the number of days of flooding, ponding and/or saturation. As we believe the hydrology criteria should not be changed to extend the number of consecutive days for flooding, ponding and/or saturation, we do not believe that Table 5 would be meaningful. However, we believe that there should be an effort made to maintain the current criterion for hydrology so that our wetlands are still delineated as

wetlands. Regionalization of the hydrology criterion for the Midwest and the Great Plains is likely the key.

Soil Indicators:

Although we have not done testing in the Midwest for soils to date, we have done testing in the Great Plains through the interagency group. During the sampling in the Great Plains, we found that the new soil indicators are not found in certain wetland types, such as saline wetlands and seeps. We also found that the soils that are near the edge of wetter areas in playads do not meet the new soil indicators (the drier areas at the fringes meet the criteria, but not the wetter areas). The loss of these areas as wetlands is problematic. Even though these areas may no longer be determined to be jurisdictional under the Clean Water Act (CWA), we have three states in Region 7 and one Tribe that use the 1987 Manual for waters of their states\tribe. Furthermore, if the CWA is revised in the future, these areas that are lost due to the proposed revisions would never be delineated as wetlands.

Recommendations:

We believe that many thousands of acres of wetlands within Region 7 will no longer be delineated as wetlands as a result of the proposed revisions to the criteria and indicators. This estimation is based on both the field experience of our staff (30 years) and recent field testing through the interagency team in Kansas. While refinement and regionalization of the indicators is needed, we believe that further testing is also needed before the old indicators are removed (e.g., the proposed Table 1 of both Supplement that lists which Sections of the Manual are to be replaced). There is no reason to throw out the proverbial baby with the bathwater until the consequences are understood more fully. Additionally, the testing that has been completed for the Great Plains has been limited and does not present a full picture of the consequences. As it appears, however, we will definitely lose areas that will no longer be classified as wetlands.

The TS for Hydrology in Problem Areas is not accurate for the vast majority of areas that we have previously been determining as wetlands. Because all other criteria for the frequency and duration of hydrology are being removed that allow us to determine these areas as wetlands, we believe that the TS should not be applied to either the Midwest or Great Plains Supplements. When our hydrology study is completed, we will have further documentation about the true hydrology of some of our wetlands, and that data will constitute a larger sample size than that collected in the NAS study. However, the data collected will be limited to specific wetlands and not present a full picture of hydrology for all of our wetland types. Until valid science proves that the TS is accurate for the Midwest and the Great Plains, we believe it should not be incorporated into the document. Use of a 7 to 11 days of consecutive flooding, ponding and\or saturation would serve as a TS for the hydrology criterion for both areas, regardless of the change in growing season definition.

If the true purpose of the regionalization effort is to develop a more accurate method of delineating wetlands without reducing the number of acres of wetlands, the Corps must seriously consider these comments. We again appreciate the opportunity to comment on the Supplements.