

PUBLIC COMMENTS AND RESPONSES

The following comment letter concerning technical issues in the draft Interim Midwest Regional Supplement to the 1987 Corps of Engineers wetland delineation manual was received by the Corps in response to a public notice issued by the affected districts in June of 2007. Although the U.S. Environmental Protection Agency (EPA) participated on the Midwest Working Group and in the field testing of the draft Midwest regional supplement, they also submitted a letter during the public comment period. Responses to various technical points in their letter are given below in italic Arial font and were developed by the U.S. Army Engineer Research and Development Center (ERDC).

EPA Region VII, Kansas City, KS (Margaret Stockdale), letter dated 16 August 2007:

During meetings for both of the above mentioned Supplements [i.e., the Great Plains and Midwest 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.

Response: We understand that EPA has contracted with a private firm to test portions of the Great Plains and Midwest regional supplements, particularly the wetland hydrology standard used when an indicator-based wetland determination is not possible. However, as of 8 July 2008, the Corps has not received any report or other documentation from EPA to support the statement that "many thousands of acres of wetlands will no longer be defined as wetlands if the Supplements are adopted." In fact, interagency field testing of the Great Plains and Midwest supplements, in which EPA participated, indicated that wetland boundaries remained unchanged on 51 of 63 (81%) test sites. On those sites where wetland boundaries differed under the supplements, 4 sites had more wetland identified under the supplements and 8 sites had less wetland identified under the supplements, compared with previous practice under the 1987 Manual. On the 8 sites where less wetland was identified, differences were due almost entirely to the supplements' use of the National Technical Committee for Hydric Soils' (NTCHS) field indicators of hydric soils in place of those given in the 1987 Manual. The NTCHS field indicators are a refinement of the 20-year-old indicators given in the 1987 Manual. They are based on recent testing and experience, and are considered more "scientifically" valid than those in the 1987 Manual. Therefore, the Corps sees no support for EPA's statement that "many thousands of acres of wetlands will no longer be defined as wetlands" under the supplements. Furthermore, on those sites where wetland boundaries may shrink under the supplements, those changes appear to be due to the application of better science in wetland identification.

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 within Region 7. For your information, Region 7 includes the states of Iowa, Kansas, Missouri and Nebraska.

Response: In the majority of cases, wetland identification involves the use of indicators that can be observed during a brief site visit. Hydrologic data are only needed in relatively rare cases where wetlands have been so disturbed by human activities, or are naturally problematic, that indicators are missing. Even so, many of these situations can be resolved using procedures given in Chapter 5 of the draft Midwest regional supplement without resorting to time-consuming and expensive hydrologic monitoring. However, for those cases where the analysis of hydrologic data is needed to confirm the presence of wetlands, it is important to use a hydrologic standard based on the best available science. The National Academy of Sciences (NAS) is a prestigious scientific organization whose recommendations are accepted as authoritative by the Federal government. In making their recommendation on a wetland hydrology standard, the NAS reviewed the available literature and interviewed many wetland scientists. They identified shortcomings and gaps in current knowledge but, nonetheless, made a recommendation based on the best available science. Their 14-day hydrologic standard has been adopted as the default standard in all Regional Supplements, unless a different standard has been established locally for a particular region or wetland type. If the study that EPA is currently conducting results in a revised and scientifically valid wetland-hydrology standard for the Midwest region, then the new regional standard can be used in place of the general standard recommended by the NAS. However, the lack of complete knowledge should not preclude making needed improvements in wetland-delineation procedures if they are based on the best available information.

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.

Response: We agree that both inundation and saturation are components of the hydrology of wetlands. That is why the technical standard requires 14 consecutive days of flooding, ponding, or a water table within 12 inches of the surface during the growing season at 50% or higher frequency. Furthermore, there is no requirement in the supplements that studies of wetland hydrology must be carried out in every wetland type in a region in order to make changes in the standard.

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).

Response: As noted above, wetland delineation is based on indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. These are the best readily-available evidence for the presence of a functioning wetland ecosystem. It is not clear why EPA used a hydrologic approximation to estimate the amount of wetland around Lake of the Ozarks, except perhaps for the large size of the area. However, this approach is unlikely to produce a reliable jurisdictional boundary (except at a general planning level) because it appears to be based on gauge data of surface water alone, without taking soil saturation by groundwater, the presence or absence of hydric soil indicators, or the vegetation into account. We cannot predict how wetland boundaries determined by surface ponding alone might relate to the boundaries determined by using procedures given in the regional supplement.

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 playas 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.

Response: Interagency field testing in the Midwest region revealed only 2 (out of 29) sites where the use of NTCHS hydric soil indicators produced a lower wetland boundary (smaller wetland) than current practice under the 1987 Manual. However, these results could not be verified as a soil scientist was not present at either site during field testing. The National Advisory Team examined the data at their June 2008 meeting and decided to ask NTCHS to review the case. If NTCHS determines that changes in hydric soil indicators are needed, these changes will be incorporated immediately into the Midwest supplement. According to the Working Group, “saline wetlands” are not an issue in the Midwest. In addition, new wording in the supplement clarifies that the wetter, interior portions of a wetland are considered to have hydric soils even if they lack indicators, as long as hydric soil indicators are present along the wetland’s edge.

While refinement and regionalization of the indicators is needed, we believe that further testing is also needed before the old indicators are removed...

Response: The NTCHS hydric soil indicators have been developed and tested by NRCS soil scientists and others over more than 15 years, and the testing and refining of these indicators is a continuing process. The NTCHS indicators represent the state-of-

the-science in hydric soil identification. In contrast, the indicators given in the 1987 Manual were first approximations that have never been updated or tested except by routine use. They are obsolete and should not be used. If changes in hydric soil indicators are needed, they should be accomplished through the NTCHS process.

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 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.

Response: We agree that the EPA study has the potential to provide data that will allow us to refine the wetland hydrology standard for Great Plains and Midwest wetlands. If so, it will be incorporated immediately into the supplements. Until then, however, the NAS recommendation of 14 days of inundation or saturation represents the best science on wetland hydrology. EPA's suggested standard of "7 to 11 days" appears to be based on the 1987 Manual (i.e., 5% of the growing season). That standard was invented solely for use in the 1987 Manual and has no basis in the scientific literature. In developing Regional Supplements, the Corps is committed to using only the best available science, whenever possible. Furthermore, the interim Midwest supplement represents the consensus of the 32 members of the interagency Midwest Working Group and was approved for release by the 16-member interagency National Advisory Team. It represents the current state-of-the-science. If better information becomes available, there is a mechanism in place to revise and update the supplement.