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Issue Paper
IMPLICATIONS AND MANAGEMENT
OPTIONS FOR WETLANDS THAT FAIL
TO MEET “DESIGNATED USE” CRITERIA

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IMPLICATIONS AND MANAGEMENT OPTIONS FOR WETLANDS THAT FAIL TO MEET “DESIGNATED USE” CRITERIA

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This paper has been prepared to stimulate discussion. What are the implications and management options for wetlands that are listed on a state Clean Water Act 303(d) list because they fail to meet “designated use” criteria under the Clean Water Act? What suggestions may be made for addressing such wetlands? What are the unanswered policy and legal questions?

Clean Water Act Requirements

303(d) Lists and Total Maximum Daily Loads (TMDL’s)

The term "303(d) list" is short for the list of impaired and threatened waters (e.g., stream/river segments, lakes) that the Clean Water Act requires all states to submit for U.S. Environmental Protection Agency (EPA) approval every two years on even-numbered years. The states must identify all waters where pollution controls are not sufficient to attain or maintain applicable water quality standards, and establish priorities for development of TMDLs² based on the severity of the pollution and the sensitivity of the uses to be made of the waters, among other factors (40C.F.R. §130.7(b)(4)). States must then provide a long-term plan for completing TMDLs within 8 to 13 years from first listing.

EPA policy allows states to remove waterbodies from the list after they have developed a TMDL or after other changes to correct water quality problems have been made. Occasionally, a waterbody can be taken off the list as a result of a change in water quality standards or removal of designated uses; however, designated uses cannot be deemed unattainable and removed until analysis clearly shows that they cannot be attained.

Current EPA regulations³ call for 303(d) lists to include only waters impaired by “pollutants,” not those impaired by other types of pollution such as altered flow regimes and/or channel modifications.” If it is certain that a waterbody’s impairment is not caused by a “pollutant” but is due to another type of pollution such as flow, the water body does

¹Association of State Wetland Managers. The ideas expressed in this paper are those of the author and not necessarily those of the Association or the State of Maryland. Some of the material included in the paper has been extracted from EPA web sites.

²See companion papers including Jon Kusler, Water Quality Standards for Wetlands; Jon Kusler, TMDLs and Wetlands.

³<http://www.epa.gov/watertrain/cwa/cwa26.htm>

not need to be on the 303(d) list. If however, biological monitoring indicates there is impairment of aquatic life uses, but it is not clear whether a pollutant is at least one of the reasons, the water should be on the 303(d) list and further analysis to identify the causes are needed. Waters impaired by “non-pollutant pollution should be identified in 305(b) reports.”⁴

How Do States Identify Impaired Waters?

EPA regulations require states and tribes to evaluate "all existing and readily available information" in developing their 303(d) lists (40 C.F.R. §130.7(b)(5)). EPA guidance documents “mention a number of different types of data and information that are considered “existing and readily available.” “EPA has stated that such data includes: (1) evidence of exceedance of a numeric WQC, (2) direct evidence of beneficial use impairment, (3) evidence that narrative standards are not being met, and (4) results of computer modeling of the waterbodies. EPA also requires that data from sources other than the state agency itself -- federal agencies, universities, volunteer monitoring groups - - must be considered if they meet the state's requirements for data quality.”⁵

Due to a lack of resources, most state water quality agencies are able to monitor only a small percentage of their waters consistently enough to detect water quality problems. Many state agencies use data collected from outside organizations and the public to compile their lists. There are usually requirements for data collection and submission before state agencies will consider the data. Many states also use a rotating schedule to monitor waters.

Options for Wetlands That Fail to Meet Designated Use Criteria

EPA has made it clear that states are to address wetlands in their water quality criteria.⁶ But, there are many unanswered questions with regard to state options for wetlands which fail to meet designated use criteria. EPA has not issued guidance concerning such options.

Options include the following. It is to be noted that without EPA guidance or judicial decisions the legality of some of these options is unclear.

- **A state could identify and list all impaired wetlands, adopt TMDLs or TMDL equivalents for them, and then undertake remedial measures.** The state could de-list wetlands once remedial measures are implemented. Such remedial measures could include (note, this is only a partial list):

⁴See Section 26 of Clean Water Act Module, Watershed Academy, <http://www.epa.gov/watertrain/cwa/right26.htm>

⁵Id.

⁶<http://www.epa.gov/owow/wetlands/regs/quality.html>. EPA provides in its National Guidelines: Wetland Water Quality Standards for wetlands that “Water quality standards for wetlands are necessary to ensure that the provisions of the Clean Water Act (CWA) applied to other surface waters are also applied to wetlands.”

- Adopting or tightening regulations for point and nonpoint pollution sources into wetlands,
- Adopting watershed plans and regulations for nonpoint sources such as fill and grading regulations, vegetation removal regulations,
- Acquiring buffer areas through easements or fee to reduce nutrients, sediment, or other pollutants,
- Restoring wetlands, or
- Creating or enhancing wetlands.

This is the most straight forward approach for addressing “impairments” and consistent with Clean Water Act state/EPA approaches for other waters. However, states face a variety of difficulties in implementing such an approach including lack of detailed data concerning wetland impairments for most wetlands, difficulty in establishing total quantified maximum daily loads for wetland impairments such as sediment, high cost in gathering necessary data, limited funds, lack of water quality standards for wetlands, and the inadequacy of controlling pollution alone in restoring wetlands. See Jon Kusler, *How Wetlands Differ from Traditional Waters: What This Means to Wetland Water Quality Standards* (2010); Jon Kusler, *TMDLs and Wetlands* (2010), companion papers to the present paper.

- **On the other extreme, a state could omit wetlands from their 305(b) and 303(d) lists.** This is the position, with minor exceptions, of all states at the present time. No state has apparently examined their wetlands extensively or “listed” more than a few wetlands for 303(d) purposes. EPA has not forced states to adopt water quality standards for wetlands or to list wetlands although it issued guidance for such regulations in 1990. A variety of arguments have been made by states for omitting their wetlands including lack of data sufficient (see below), lack of water quality standards for wetlands, and ongoing remedial planning such as watershed planning (also discussed below). However, the legality of this position is unclear, particularly where pollutants such as toxic wastes or fecal material which violate water quality standards are being discharged into wetlands. EPA’s position may change over time, especially if law suits by environmental organizations or others succeed in challenging the failure of states to examine and list wetlands along with other waters.
- **A state could confine its efforts to list wetlands and adopt TMDLs for wetlands where wetland degradation is only caused by “pollutants” such as bacteria, toxics, and excessive nutrients.** Focusing only on “pollutants” is apparently all that is required by present EPA regulations. Confining 303(d) lists and TMDL preparation to wetlands subject to pollutants would substantially limit the number of wetlands with listed impairments in comparison with also including wetlands degraded by filling and drainage. A 2009 court decision concludes that EPA is not required to address all impaired waters where impairment is due to something other than a pollutant. See *Thomas v. Jackson*, 08-2152 (8th Cir. 9-10-2009). However, EPA may have the option to do so and may do so in the future. In addition, states may regulate the full range of threats under their own water pollution control laws.

- **A state may be able to assess the ecological condition of wetlands at watershed scales using statistical sampling and “reference” without formally listing them as impaired for 303(d) purposes.** Collection of statistical data pertaining to condition for classes of wetlands as a whole for planning purposes (e.g., the 2011 National Wetland Condition Inventory) may fall short of the quantitative data needed to characterize individual wetlands for listing and the preparation of TMDLs for such wetlands. States could characterize such waters as “Category 3” waters (i.e., there is “insufficient available data and/or information to make a use support determination.”)
- **A state may be able to identify wetlands subject to stressors (pollutants, drainage, fills, flooding) as part of watershed planning efforts and adopt remedial measures such as wetland restoration efforts to address the stressors rather than place the wetlands on a 303(d) list.** It has been suggested that states could avoid initially listing wetlands as impaired for 303(d) purposes as long as compensatory mitigation including remedial actions such as restoration are underway. It is not clear, however, to what extent compensatory or other remedial measures need to be actually implemented to avoid initial listing and the legality of this approach has not been tested.
- **A state might designate wetland “beneficial uses” and adopt criteria for such uses allowing some measure of pollution or other form of degradation.** States might designate wetlands for “agriculture,” “forestry,” “industrial,” or other “designated uses” involving some measure of degradation. Wetlands so characterized might not need to be included as “listed” waters since some measure of degradation would be consistent with the beneficial use. However, a court might find such practices inconsistent with antidegradation requirements or in violation of use attainability requirements if criteria for the designated uses do not meet the swimmable/fishable standard.
- **A state could carry out a “use attainability analysis.”⁷** A state could conduct a use attainability analysis” for any water body with designated uses that do not meet the “fishable/swimmable” goal identified in the section 101(a)(2) of the Clean Water Act. Such water bodies must be reexamined every three years to determine if new information has become available that would warrant a revision of the standard. If new information indicates that “fishable/swimmable” uses can be attained, such uses must be designated. Such analyses might be carried out generically for a whole class of wetlands although no state has apparently done so. EPA describes a “use attainability analysis” in the following way (http://www.epa.gov/waterscience/standards/uses/uaa/about_uaas.htm):

A “Use Attainability Analysis (UAA) is a structured scientific assessment of the factors affecting the attainment of uses specified in Section 101(a)(2) of the Clean Water Act (the so called “fishable/swimmable” uses). The factors to be considered in such an analysis include the physical, chemical, biological, and economic use

⁷All waters are to meet the swimmable/ fishable standard unless a use attainability analysis has been undertaken. See <http://www.epa.gov/waterscience/standards/uses/uaa/index.htm>

removal criteria described in EPA's water quality standards regulation (40 CFR 131.10(g)(1)-(6)).

Under **40 CFR 131.10(g)** states may remove a designated use which is not an existing use, as defined in § 131.3, or establish sub-categories of a use if the State can demonstrate that attaining the designated use is not feasible because:

- Naturally occurring pollutant concentrations prevent the attainment of the use; or
- Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
- Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
- Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
- Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
- Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.”

Recommendations

There are many unanswered questions concerning the legality and practicality of various state options for wetlands that fail to meet “designated use” criteria. Nevertheless, it is possible to make several suggestions:

- **A state may best take a cautious approach to TMDLs and, alternatively, look to watershed planning and regulations to address most impairments to wetlands.** See Jon Kusler, TMDLs and Wetlands. Because of the cumbersome nature of TMDLs, difficulty in establishing numeric standards for total maximum daily loads, and many unanswered legal questions, a combination of multiobjective, watershed planning and regulations is more promising in most circumstances to address the full range of sources of wetland impairment rather than “listing” of individual wetlands and adoption of a TMDL for each pollutant. In many instances, regulation of pollutants alone addressed by TMDLs will not, meet Clean Water Act goals to “restore and maintain” waters of the U.S.

- **Although a cautious approach is advisable for preparation of state wetland TMDLs, there are situations in which wetland TMDLs are justified.** These include wetlands subject to quantifiable discharges not in compliance with state water quality criteria for pollutants such as toxics or bacteria. In such situations, wetlands can and should be treated like other waters. This is consistent with the Clean Water Act requirements for all surface waters. In addition, if a state is to list wetlands and prepare TMDLs, it should not confine the TMDLs to “pollutants” and should also address broader sources of “pollution” such as drainage.
- **A state may be able to use wetland “listing” and TMDLs as a planning/regulatory tool to help identify and address not only point sources of pollution but nonpoint sources of pollution or combined point and nonpoint sources as done by Los Angeles County for trash discharges into wetlands and rivers/streams.** See also the proposed TMDL for the Chesapeake. <http://edocket.access.gpo.gov/2009/pdf/E9-22410.pdf>
- **As an alternative to “listing,” a state might, through cooperative state/local watershed planning and plan implementation efforts, “go directly to the solution” of wetland impairments rather than list wetlands as impaired and trigger TMDL requirements.** The legality of directly addressing problems rather than going through the TMDL process remains to be seen but it is likely such an approach would be upheld given the broad discretion courts have given states in adopting TMDLs to date.
- **A state should document the water quality component of “nonpollutant” activities on wetlands (e.g., drainage).** Over time, this component may be quantified and serve as basis for more wetland-specific water quality standards, for listing wetlands, and for preparing TMDLs or applying alternative watershed plans and management approaches.
- **A state should develop and adopt state wide, wetland-specific water quality standards for both nontidal and tidal wetlands.** See companion paper for a discussion of the benefits of such standards: Jon Kusler, Water Quality Standards for Wetlands. State water quality standards for wetlands are required by EPA. Standards could facilitate Section 401 reviews, provide the basis for “listing” of wetlands as impaired, and facilitate the adoption of TMDLs or other remedial measures short of actual listing.
- **A state could use constructed and restored wetlands as part of TMDLs to help reduce nutrient, sediment, and toxic chemical pollution of rivers, streams and other water bodies and help achieve broader goals for those water bodies.** Restoration can also be used to restore impaired wetland functions. See Jon Kusler, TMDLs and Wetlands. However, use of restored wetlands for

pollution control may in many instances result in long term degradation of wetlands and should be approached with care.⁸

- **A state could ask EPA for clarifications on unanswered questions.** A state could develop a list of unanswered questions and submit the list to EPA. Answers would help the state evaluate the need for additional actions. See Appendix A of Kusler, Jon, Implications and Management Options for Wetlands That Fail To Meet “Designated Use” Criteria.

Appendix A: Legal and Policy Issues; Unanswered Questions

States face a variety of tough legal and policy issues with regard to listing wetlands as impaired waters. There is, as yet, little EPA wetland-specific guidance on these issues. Some major questions include:

- When does degradation of a wetland reach the level of “impairment”? How much of a “pollutant” is required? What sort of data is needed to justify a listing? What sort of data will require a listing? Will unquantified data on impairments suffice? There is limited guidance from EPA on these questions.
- Is the concept of impairment sufficiently broad to require listing wetlands not only subject to traditional pollutants but filling and draining which are major threats to wetlands? Most states would appear to have the power to regulate not only traditional pollutants but other forms of impairment under their state water quality statutes but EPA does not presently require listing of areas on state 303(d) lists or inclusion waters on 305(b) lists if impairment is by “pollution” but not a “pollutant.” However, water quality problems are often compounded by water quantity issues (e.g., insufficient low flows) and no clear legal line exists between water quantity and quality for wetland water quality purposes.
- Must a state include on its 303(d) list all “impaired” wetlands? Or, may it avoid listing for some by proscribing and undertaking remedial actions prior to formal listing for some wetlands? See below. If so, what sorts of pre-formal listing actions must it take?
- If a state adopts a TMDL for a wetland, what remedial actions must it take before it can remove a wetland from the TMDL list? A plan for action? Partial actions? Completion of remedial actions?
- To what extent may a state establish beneficial uses such as agricultural or forestry for wetlands which inherently involve considerable amounts of pollution or other degradation of wetlands without violating the overall CWA antidegradation policy? The swimmable/fishable requirement?

⁸See, for example, 40 CFR 131.10 which provides, in part: “In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States.”

- If states are to utilize wetlands to help meet TMDL limits in other water bodies, how much degradation of the wetlands is to be allowed before the nondegradation limits of the Clean Water Act apply? What limits are consistent with sustainable wetland systems?
- If states and tribes are required to adopt TMDLs for wetlands, how much time from the date of listing do they have to adopt the TMDL?
- Might a state utilize a “use attainability analysis” for an entire class of wetlands (e.g., “farmed wetlands”) or a group of wetlands rather than simply an individual wetland?

Appendix B: Recommended Readings and Sources. (See generally):

National Academies Press, Assessing the TMDL Approach to Water Quality Management (2001)

http://www.nap.edu/openbook.php?record_id+10146&page=1

U.S. Environmental Protection Agency, Guidance for Water Quality-based Decisions: The TMDL Process (1991)

<http://nepis.epa.gov/Exe/ZyNET.exe/00001KIO.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1991+T>

United States, Environment Protection Agency TMDL website

<http://www.epa.gov/owow/tmdl/>

Maryland TMDL Webpage

<http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/index.asp>

Local Government Processes in Maryland's TMDL Development Program

http://www.mde.state.md.us/Programs/WaterPrograms/TMDL/tmdl_localgov.asp

EPA Region 3 Total Maximum Daily Load (TMDL) Website

<http://www.epa.gov/reg3wapd/tmdl/>

Zakia Swamp TMDL, Nutrients, suspended sediments, copper, lead, zinc, and selenium.

http://www.epa.gov/reg3wapd/tmdl/MD_TMDLs/ZekiahSwampWQA/Zekiah%20Swamp_WQA_ltr.pdf

TMDLs and Water Quality Protection in Maryland

<http://www.dnr.state.md.us/bay/tribstrat/monitor/fall97/tmdls.html>

EPA, Handbook for Developing Watershed Plans to Restore and Protect Our Waters,

<http://www.wq.uiuc.edu/wtshhdbk/biblio.pdf>

Remedial Action Plan addressing Nickel Prepared for Unnamed Wetland in Michigan and Wetland Removed from TMDL list.

<http://www.gis.iwr.msu.edu/tmdl98/tmdl.htm>

The Role of Total Daily Maximum Loads (TMDLs) in Planning and Managing Stream Restoration Projects in Urbanizing Watershed: New Jersey Case Study, Phase B

Witherill, American Geophysical Union, Spring Meeting 2005, abstract #NB24E-06

<http://adsabs.harvard.edu/abs/2005AGUSMNB24E.06W>

Protocol for Developing Pathogen TMDLs. Washington, DC: United States Environmental Protection Agency, Office of Water, 2001. EPA 841-R-00-002.

<http://purl.access.gop.gov/GPO/LPS50982>

Trash Total Maximum Daily Loads for the Los Angeles River Watershed. Los Angeles, CA: California Regional Water Quality Control Board, Los Angeles Region, 2001.

Restoring Our Water Heritage, Wisconsin DNR, A TMDL: Creating a Better Future for the Lower Fox River and Green Bay-

http://www.eastcentralrpc.org/planning/compplan/milestone3/MS3Final/APPENDICES/AppendixG_WNDR%20TMDL%20Fact%20Sheet.pdf