GENERALLY ILLEGAL: NPDES GENERAL PERMITS
UNDER THE CLEAN WATER ACT

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I. INTRODUCTION

For over thirty years, federal water pollution policy has relied on the use of a federally mandated permit, the National Pollutant Discharge Elimination System ("NPDES") permit, to limit the discharge of pollutants. 1 It is the NPDES permit that contains both limitations on the amount of pollutants that a source may discharge and the monitoring and reporting requirements that form the basis of effective enforcement. In most cases, the owner or operator of a facility applies to either the Environmental Protection Agency ("EPA") or a state permitting authority for its own NPDES permit, 2 and the permit writer evaluates facility-specific information to determine the appropriate permit terms and conditions. 3 The process of issuing these individual permits requires public disclosure of both the permit application and the permit itself, and there are substantial opportunities for public participation. EPA has stated that over 48,000 industrial facilities have been issued individual NPDES permits. 4

But there is another mechanism by which sources may obtain coverage under an NPDES permit. Since 1979, EPA and states have had a process of

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1 The Clean Water Act makes it "unlawful" to discharge pollutants without meeting certain conditions. Clean Water Act ("CWA") § 301(a), 33 U.S.C. § 1311(a) (2006). The Environmental Protection Agency ("EPA") is authorized to issue permits allowing the discharge of pollutants meeting these conditions, or such conditions as the EPA deems necessary. Id. § 402, 33 U.S.C. § 1342(a).

The Clean Water Act actually establishes two quite different permit programs that address two different types of discharges of pollutants. The NPDES permit program, authorized under section 402 of the Act, deals primarily with the addition of pollutants by industrial and municipal point sources. See infra notes 13-56 and accompanying text for a discussion of the structure of the NPDES permit program. The Act also establishes a distinct permit program under which the Army Corps of Engineers issues dredge and fill permits that apply to the removal (dredging) or addition (fill) of materials from or to navigable waters. CWA § 404, 33 U.S.C. § 1344. See also id. § 318, 33 U.S.C. § 1328 (authorizing permits for pollution associated with aquaculture projects).

2 EPA was initially responsible for issuance of all NPDES permits. The Clean Water Act, however, authorizes the delegation of permit issuance authority to states. CWA § 402(b), 33 U.S.C. § 1342(b). "States" is defined to include certain U.S. possessions and territories, id. § 502(3), 33 U.S.C. § 1362(c), and tribal authorities. Id. § 518(e), 33 U.S.C. § 1377(e). For convenience, and because the relevant issues do not vary depending on whether an NPDES permit is issued by an approved state or tribal authority, this Article will generally refer to the delegated authorities as "states."

3 See generally 40 C.F.R. § 122.44 (2006) (criteria for "establishing limitations, standards and other permit conditions").

issuing “general permits” to satisfy the requirements of the Clean Water Act. These general permits may contain enforceable effluent limitations and other requirements, but, unlike individual permits, they may apply to large numbers of sources discharging into many different bodies of water. The conditions of a general permit are developed through a “notice and comment” process similar to development of a regulation, but the application of the general permit to an individual source differs dramatically from the process of issuing an individual NPDES permit. Sources seeking coverage under a general permit generally need only submit a “Notice of Intent” to the permit authority, and they are then authorized to discharge under the terms of the general permit without additional government review or public participation. EPA has stated that over 300 general permits have been issued and that “thousands” of point sources have been covered through general permits. General permits have been used to permit a wide variety of sources, from industrial and municipal storm water discharges and Concentrated Animal Feeding Operations (“CAFOs”) to redi-mix concrete plants and water treatment facilities.

The Clean Water Act provides no special provisions applicable to the issuance or content of general permits; they are subject to the same substantive and procedural obligations that are applicable to all NPDES permits. The use of general permits to satisfy the otherwise applicable requirements of the Clean Water Act, however, raises significant issues. How, for example, can a general permit, applicable to a wide variety of sources discharging into different bodies of water, adequately comply with the inherently site-specific requirements to ensure attainment of state water quality standards? How can the process of authorizing sources under the terms of a general permit adequately ensure public participation and citizen enforcement? These questions have existed since the beginning of the general permit program, but EPA has never adequately confronted the tension between the requirements for site-specific permitting and the generic, almost regulatory approach of general permits. In fact, EPA has failed to develop any coherent

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5 EPA defines a “general permit” as “an NPDES ‘permit’ issued under [40 C.F.R.] § 122.28 authorizing a category of discharges under the CWA within a geographical area.” 40 C.F.R. § 122.2 (2006). The provisions of section 122.28 are discussed infra notes 89-122 and accompanying text.

6 See Brief of Respondent at 42, Wis. Builders Ass’n v. EPA, Nos. 03-2908 et al. (7th Cir. Sept. 22, 2004), consolidated as Tex. Indep. Producers and Royalty Owners Ass’n v. EPA, 435 F.3d 758 (7th Cir. 2006) [hereinafter “EPA Brief”].


8 See infra notes 123-151 and accompanying text for a discussion of the scope of sources covered by general permits.

9 In contrast to specific authorization for use of general permits under the section 404 “dredge and fill” program, CWA § 404(e), 33 U.S.C. § 1344(e) (2006), the Clean Water Act provides no specific statutory authority for the use of general permits to satisfy the NPDES permit requirement. See infra notes 57-61 and accompanying text for discussion of the legality of the use of general permits.
set of policies and for over two decades has issued a series of general permits that contain a hodgepodge of varying provisions.

In a series of recent cases, fundamental aspects of the general permit program have been called into question. In *Environmental Defense Center v. EPA*, the Ninth Circuit rejected the adequacy of EPA’s public participation procedures for a general permit and concluded that EPA’s failure to review pollution plans developed by permittees constituted a “failure to regulate.”

In *Waterkeeper Alliance v. EPA*, the Second Circuit reached similar conclusions in rejecting elements of EPA general permit regulations applicable to CAFOs.

In *Friends of the Wild Swan v. EPA*, the Ninth Circuit raised serious questions about EPA’s ability to issue permits for new discharges on waters not yet achieving water quality standards. Taken together, these cases raise questions about the basic structure and scope of the general permit program.

The purpose of this Article is to assess the legality of the use of general permits to satisfy the NPDES requirement of the Clean Water Act. Part I begins with a brief overview of the basic substantive and procedural obligations applicable to the NPDES permit program. Part II addresses the history of the general permit program and discusses the current regulatory provisions that EPA has promulgated regarding their use. The Article continues with a discussion of a series of major issues that are raised by the use of general permits. These include, among others, issues relating to compliance with water quality standards provisions, the use of pollution plans developed by permittees that are neither reviewed nor approved by the government, and the provisions for public participation in permit issuance and enforcement. The Article suggests a variety of revisions to the general permit program that address some of the existing infirmities.

The EPA general permit program is now essentially incoherent, and existing federal and state issued general permits violate many fundamental requirements of the Clean Water Act. Although general permits can fill a useful role in implementing the NPDES permit program, EPA will need to modify its general permit policies to provide for greater public participation and government oversight to ensure compliance with water quality standards. The acknowledged efficiency advantages of general permits simply cannot trump the substantive requirements of the Clean Water Act.

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10 344 F.3d 832, 854-56 (9th Cir. 2003).
11 399 F.3d 486 (2d Cir. 2005).
12 74 F. App’x 718 (9th Cir. 2003).
II. THE NPDES PERMIT PROGRAM

The discharge of pollutants, otherwise illegal under section 301(a) of the Clean Water Act, can be authorized by compliance with an NPDES permit.13 The Act provides:

(1) [T]he Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding [section 301(a) of the Act], upon condition that such discharge will meet either (A) all applicable requirements under [various sections of the Act], or (B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.14

Although EPA was initially responsible for issuing all NPDES permits, section 402(b) authorizes the delegation of this authority to states if their laws and regulations establish a permit program that is substantially equivalent to the federal program.15 At the moment, 45 states have full or partial authority to issue NPDES permits to sources within their jurisdiction.16

The NPDES permit program was one of the central innovations of the Federal Water Pollution Control Act (“FWPCA”) Amendments of 1972.17

13 The “discharge of a pollutant” is unlawful unless in compliance with various sections of the Act. CWA § 301(a), 33 U.S.C. § 1301(a)(1).
14 Id. § 402, 33 U.S.C. § 1342.
15 Id. § 402(b), 33 U.S.C. § 1342(b); see also 40 C.F.R. § 123 (2006) (state program requirements).
16 See EPA, EPA State Program Status, http://cfpub.epa.gov/npdes/statestats.cfm (last visited Mar. 17, 2007) (on file with the Harvard Environmental Law Review). Most states now have authority to issue NPDES permits to sources within their jurisdiction, but not all state programs are authorized to issue permits to all classes of dischargers or to issue general permits. Id. In cases in which the state has not assumed full permit-issuing authority, either EPA or the state may be the NPDES permit-issuer depending on the scope of authorization. See infra notes 119-121 and accompanying text for a discussion of delegation of authority to issue general permits.
dards. Although states were required to develop implementation plans, there was no specific federal obligation to issue permits to sources of pollution. Enforcement involved a complex process in which the government was required to trace in-stream pollution back to specific dischargers, and, given the difficulty of this task, enforcement was largely nonexistent.18

The 1972 amendments replaced this general obligation to comply with state-established in-stream water quality standards with the obligation to obtain and comply with a federally-mandated NPDES permit. The NPDES structure established a relatively simple and effective mechanism for identifying and enforcing pollution requirements. Violations of pollution requirements were established, not by focusing on the effect of the discharge, but simply by establishing non-compliance with the specific limits in the permits.19 As the Supreme Court stated in the early days of implementation of the program:

An NPDES permit serves to transform generally applicable effluent limitations and other standards including those based on water quality into the obligations (including a timetable for compliance) of the individual discharger, and the Amendments provide for direct administrative and judicial enforcement of permits . . . In short, the permit defines, and facilitates compliance with, and enforcement of, a preponderance of a discharger’s obligations under the Amendments.20

The NPDES permit not only defines obligations, it also limits the scope of those obligations. Under the Act’s “permit shield” provisions, permittees who comply with the specific requirements of their NPDES permit are generally deemed to be in compliance with all requirements of the Clean Water Act (except standards for toxic pollutants injurious to human health) regardless of whether those requirements have been included in the permit.21

A. The Scope of the NPDES Permit Program

The NPDES permit obligation applies exclusively to “discharges of pollutants.”22 This phrase is defined in the Act to apply to the “addition” of

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18 See Gaba, supra note 17, at 1178-79.
19 See CWA § 309, 33 U.S.C. § 1319 (authorizing administrative, civil, and criminal penalties for violation of conditions and limitations in an NPDES permit).
21 CWA § 402(k), 33 U.S.C. § 1342(k); see Pinney Run Pres. Ass’n v. City Comm’rs, 268 F.3d 255 (4th Cir. 2001) (holding that permit shield applies to discharge of pollutants not listed in its permit, as long as it only discharges pollutants that have been adequately disclosed to the permitting authority); Jeffrey M. Gaba, Regulation of Toxic Pollutants Under the Clean Water Act: NPDES Toxics Control Strategies, 50 J. Envtl. L. & C. 761, 783-84 (1985).
22 CWA § 301(a), 33 U.S.C. § 1311(a).
a "pollutant" to "navigable waters" from a "point source." At its simplest, a facility that adds new pollutants from its industrial process through a pipe into a stream or lake is required to have an NPDES permit. Sources that are not "point sources" of pollutants are not subject to the NPDES permit requirements. Such non-point sources of pollutants include "area wide" runoff that does not collect into discrete ditches or other point source and "indirect dischargers" that discharge not into navigable water but into sewer systems connected to municipal sewage treatment plants, known as "publicly owned treatment works" ("POTWs").

B. Inclusion of Permit Conditions

NPDES permits are intended to include substantive restrictions on the discharge of pollutants. These effluent limitations contained in the NPDES permit in most cases specify the quantity or concentrations of specific pollutants that may be discharged from the point source. In general, there are two types of substantive restrictions imposed. First, all point sources are re-
required to meet “technology-based” limitations. Existing sources are subject to technology-based effluent limitations reflecting “best conventional technology” (“BCT”) for a limited class of “conventional pollutants” and limitations reflecting “best available technology” (“BAT”) for all other pollutants.27 New sources, defined as sources that commenced construction after promulgation of national effluent limitations for their category, are subject to technology-based limitations reflecting “best available demonstrated control technology,” generally known as “NSPS” (new source performance standard) limitations.28

Technology-based limits are determined by the level of control that is technologically and economically achievable through the use of existing technology,29 and they are developed independently of any consideration of the impact of the discharge on receiving water.30 EPA has promulgated uniform, national determinations of BAT, BCT, or NSPS for most major categories of industrial sources.31 Where such national effluent limitation guidelines exist, a permit writer may simply incorporate those limitations in an NPDES permit.32

In addition to technology-based limitations, a point source may be subject to more stringent effluent limitations, known as “water quality based effluent limitations” (“WQBELs”), necessary to assure attainment of state water quality standards.33 State water quality standards consist of three elements: “designated uses” that specify the intended uses or goals for each...
water body or segment of water in the state; criteria that are generally specific maximum numerical concentrations of pollutants in the water body that will not preclude attainment of the designated use; and an “anti-degradation” policy that may impose limits on the issuance of NPDES permits to point sources that will degrade existing water quality. The process of translating water quality standards into specific WQBELs is complex and somewhat incoherent.

Effluent limitations, whether based on technology or water quality standards, are typically expressed as a numerical limit in the quantity or concentration in the discharge of specific pollutants, and effluent limitations in NPDES permits are generally achieved through the use of waste water treatment systems that remove pollutants from the industrial effluent. In some cases, however, end-of-pipe treatment may not be feasible, and EPA regulations allow for permit limitations that require a permittee to employ “best management practices” (“BMPs”) to minimize the discharge of pollutants.

In contrast to end-of-pipe numerical limits, BMPs may require modification of industrial processes or other management practices that minimize the release of pollutants in the first place. Although the Clean Water Act only authorizes the use of BMPs as technology-based limits for the control of toxic pollutants, EPA regulations more broadly authorize the use of BMPs where necessary to “carry out the purposes and intent of the CWA.”

C. Procedures for Issuance

The Clean Water Act itself imposes only limited procedural obligations on the issuance of NPDES permits. The statute requires that the permits be

34 See CWA § 303(c), 33 U.S.C. § 1313(c); 40 C.F.R. § 131.
35 See EPA, EPA-833-B-96-003, NPDES PERMIT WRITERS’ MANUAL 104-05 (1996); Gaba, supra note 28, at 658-62. See infra notes 155-164 and accompanying text for a discussion of the process of establishing WQBELs.
36 EPA regulations define “best management practices” as “schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of ‘waters of the United States.’” BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.” 40 C.F.R. § 122.2; see also id. § 122.44(k)(3) (BMPs may be used when numeric limits are infeasible).
38 40 C.F.R. § 122.44(k)(4).
39 In several cases in the 1970s, courts held that the permit issuance process was subject to the adjudicatory procedures mandated by sections 554-557 of the Administrative Procedure Act (“APA”), 5 U.S.C. §§ 554-557. See Seacoast Anti-Pollution League v. Costle, 572 F.2d 872, 876 (1st Cir. 1978); Marathon Oil Co. v. EPA, 564 F.2d 1253, 1263 (9th Cir. 1977). Application of the formal adjudicatory hearing requirements of the APA meant that NPDES permit issuance involved the opportunity for an evidentiary hearing before an Administrative Law Judge, appeal within EPA, and a variety of evidentiary protections and limitations. In 2000, in response to subsequent cases that had raised questions about the continuing validity of the earlier holdings, EPA rejected the obligation to comply with the formal adjudicatory re-
issued “after an opportunity for a public hearing” and further provides that “permit applications” and the permits themselves be made available to the public. EPA regulations provide a process for permit issuance that includes a number of requirements relating to public notice and public comment. Public hearings may be requested, but the permit writer is required to hold such a hearing only if there is a “significant degree of public interest.” Appeals of an individual NPDES permit decision may, in certain circumstances, be taken to EPA’s Environmental Appeals Board by parties who participated in the permit issuance process.

The maximum term of an NPDES permit is five years, and permittees must apply for reissuance prior to expiration of their existing permit. As provided by the Administrative Procedure Act and EPA regulations, existing permittees who apply for an extension of their permit term are authorized to continue discharging under their old permit until EPA completes the administrative process of reissuance. New applicants, dischargers who are not currently operating under an existing permit, are generally not authorized to discharge until they have received a final NPDES permit.

Judicial review of federally issued permits is governed by section 509(b) of the Clean Water Act. Under section 509(b)(1)(F), the action of the Administrator in issuing an NPDES permit is subject to review in the appropriate federal court of appeals. Judicial review, available after exhaustion of administrative procedures, must be sought within 120 days of permit issuance. State-issued NPDES permits are subject to judicial review in state courts subject to the provisions of state law.

D. Enforcement and Citizen Suits

Point sources that discharge without a permit or permittees who violate a “permit condition or limitation” of an NPDES permit are subject to a variety of administrative, civil and criminal penalties by state and federal authorities. Civil and administrative penalties can include fines of up to...
$32,500 per day per violation.\textsuperscript{50} Criminal sanctions, available for both knowing and negligent violations, can include both monetary penalties and imprisonment for up to one year.\textsuperscript{51} Additionally, certain other actions, including submission of false information required under the Act, can result in civil or criminal sanctions.\textsuperscript{52}

The Clean Water Act also has a citizen suit provision that authorizes private citizens to bring enforcement actions against persons violating an “effluent standard or limitation.”\textsuperscript{53} The citizen suit section specifically defines “effluent standard or limitation” to include discharge without a permit in violation of section 301(a) or violation of “a permit or condition” issued under section 402.\textsuperscript{54} Citizens may seek injunctive relief to enforce a standard or limitation and civil penalties payable to the federal government.\textsuperscript{55} In addition to satisfying constitutional standing requirements, citizens seeking to bring a citizen suit must satisfy certain statutory prerequisites.\textsuperscript{56}

\section*{III. General Permits Under the Clean Water Act}

EPA, through the use of general permits, has created a mechanism by which permit authorities can issue a single NPDES permit containing a common set of effluent limitations and other permit conditions that will apply to a potentially large number of point sources. The general permit itself is issued following the notice and comment process familiar from informal rulemaking, and individual point sources that are eligible for coverage under the permit need only submit a “Notice of Intent” (“NOI”) to be covered under the permit. Following submission of the NOI, these point sources are authorized to discharge subject to the conditions of the permit. The Clean Water Act provides no express authorization for the issuance of general permits under the NPDES permit program.\textsuperscript{57} Congress has, however, belatedly acknowledged the use of general permits in the NPDES permit program. In legislation adopted in 1991 dealing with storm water discharges, Congress provided that EPA “shall issue final regulations with respect to general per-

\textsuperscript{50} Section 309 authorizes civil penalties of up to $25,000 per day. Id. § 309(d), 33 U.S.C. § 1319(d). Under the terms of the Debt Collection Improvement Act of 1996, EPA has issued a series of adjustments to the statutory penalty to reflect inflation. See 40 C.F.R. §§ 19.1-4.

\textsuperscript{51} CWA § 309(c), 33 U.S.C. § 1319(c).

\textsuperscript{52} Id. § 309(c)(4), 33 U.S.C. § 1319(c)(4).

\textsuperscript{53} Id. § 505(a)(1), 33 U.S.C. § 1365(a)(1).

\textsuperscript{54} Id. § 505(f), 33 U.S.C. § 1365(f).

\textsuperscript{55} Id. § 505(a)(2), 33 U.S.C. § 1365(a)(2).

\textsuperscript{56} Id. § 505(b), 33 U.S.C. § 1365(b).

\textsuperscript{57} In contrast, the Act provides specific authority for the issuance of general permits on a “State, regional or nationwide basis” under the section 404 “dredge and fill” permit program. Id. § 404(e), 33 U.S.C. § 1344(e). Section 404 permits, issued by the Army Corps of Engineers, authorize the dredging of material and the addition of fill material to waters of the U.S., including wetlands. Given the different set of requirements and concerns that apply to the dredge and fill program, the use of general permits raises much different concerns than those raised by the use of general permits under the NPDES program.
mits for storm water discharges associated with industrial activity on or before February 1, 1992.\textsuperscript{58}

Notwithstanding the absence of direct legislative authorization, the legality of the use of general permits to implement NPDES permit requirements has never been seriously questioned. Indeed, as discussed below, the D.C. Circuit as early as 1977 stated that the Clean Water Act “allows” the use of general permits.\textsuperscript{59} The limited case law involving challenges to elements of an EPA-issued general permit has not involved disputes as to their basic legitimacy. In \textit{Environmental Defense Center v. EPA},\textsuperscript{60} for example, a panel of the Ninth Circuit invalidated significant elements of an EPA general permit for storm water discharges from small municipal storm sewers, but did not question EPA’s authority to issue general permits. Indeed the court noted that “[g]eneral permitting has long been recognized as a lawful means of authorizing discharges.”\textsuperscript{61}

A. History of the General Permit Program

The initial impetus for general permits arose from EPA’s attempt to exclude certain types of point sources from the NPDES permit program. In 1973, only months after Congress adopted the NPDES permit program, EPA issued a regulation that exempted from the permit requirement certain discharges from storm sewers composed entirely of storm runoff uncontaminated by industrial or commercial activity, relatively small animal confinement facilities, silvicultural activities, and irrigation return flow from smaller farms.\textsuperscript{62}

EPA identified two rationales for this exclusion. First, EPA was concerned with the difficulty of developing “end-of-pipe” effluent limitations for these types of discharges. In many ways, each of the storm water and


\textsuperscript{59} NRDC v. Costle, 568 F.2d 1369, 1381 (D.C. Cir. 1977); see infra notes 65-70 and accompanying text.

\textsuperscript{60} 344 F.3d 832 (9th Cir. 2003).

\textsuperscript{61} Id. at 853. Judge Tallman, in dissent, did raise the specific issue of whether “Congress was clear in its intent concerning the propriety of a system of general permits augmented by NOIs.” Id. at 880. Reviewing various elements of the Act, including the requirements regarding the issuance of NPDES permits generally and permit obligations relating to storm water discharges, Judge Tallman stated that “the Clean Water Act fails to address the propriety of a general permit system, or whether NOIs ought to be considered ‘permits.’” Given the fact that the Clean Water Act does not address the propriety of general permits, Judge Tallman concluded that the court should have deferred to each of EPA’s judgments regarding the requirements for the general permit at issue. Id. at 880-81.

\textsuperscript{62} 40 C.F.R. § 125.4 (1975); see Form and Guidelines Regarding Agriculture and Silvicultural Activities, 38 Fed. Reg. 18,000 (July 5, 1973). EPA claimed that it was simply excluding these sources from the obligation to obtain NPDES permits, not from the requirement to comply with substantive limitations on the discharge of pollutants. It is not at all clear how EPA contemplated that sources would be subject to enforceable limitations in the absence of an NPDES permit.
agricultural discharges resembled non-point source discharges that did not lend themselves to control by placement of numerical limits on the discharge of pollutants. Second, EPA was concerned about the administrative difficulties of issuing NPDES permits to large numbers of small sources. EPA claimed that it would be administratively infeasible, given its limited resources, to issue permits to such large numbers of permit applicants.63

Environmentalists challenged this regulation, and, in NRDC v. Train,64 the district court rejected EPA’s attempt to exclude these sources from the NPDES permit requirement. The court concluded that Congress had intended that all point sources be subject to NPDES permit requirements.65 In response to EPA’s claim of administrative infeasibility, the court addressed a number of options available to EPA to ease the administrative burden. Referring to an alternative suggested by NRDC, the court, in a crucial sentence, noted that EPA “would also have substantial discretion to use administrative devices, such as area permits, to make EPA’s burden manageable.”66

On appeal, in NRDC v. Costle,67 the D.C. Circuit affirmed the trial court’s decision. Discussing the suggestion that area wide or general permits might be a method to minimize the administrative burdens of permit issuance, the court stated:

Section 402 does not explicitly describe the necessary scope of a NPDES permit. The most significant requirement is that the permit be in compliance with limitation sections of the Act described above. As a result NRDC and the District Court have suggested the use of area or general permits. The Act allows such techniques.68

The court stated that it “discern[ed] an intent to give EPA flexibility in the structure of the permits, in the form of general or area permits,”69

[65] Id. at 1402.
[66] Id.
[68] Id. at 1381. The court noted one “practical” difference between an exemption from the NPDES permit program and coverage under a general permit, even one which presumably contained no explicit effluent limitations.
[69] An exemption tends to become indefinite: the problem drops out of sight, into a pool of inertia, unlikely to be recalled in the absence of crisis or a strong political protagonist. In contrast, the general or area permit approach forces EPA to focus on the problems of specific regions and requires that the problems of the region be reconsidered at least every five years, the maximum duration of a permit.

Id. at 1382.
[70] Id. at 1383. Rejecting EPA’s rationale relating to the difficulty of developing effluent limitations for these types of sources, the court recognized that EPA had authority to establish permit conditions based not on uniform numerical limitations but through proscription of industry practices. Id. at 1380. The court concluded, “We only indicate here that when numerical effluent limitations are infeasible, EPA may issue permits with conditions designed to reduce
Following the district court opinion in NRDC v. Train (but before the Court of Appeals’ opinion in NRDC v. Costle), EPA proposed its first regulation authorizing the use of general permits. The proposal, published in 1977, would have limited the use of general permits to “point sources in the separate storm sewer and agricultural activities categories.” The proposal required the designation of a “general permit program area,” generally reflecting political, geographic, or institutional boundaries, which would define the geographic scope of a general permit. The proposal stated that “general permits will include reasonable conditions determined necessary by the Regional Administrator or Director of a State water pollution control agency to obtain progress in reducing pollution and to meet the goals of the Clean Water Act.” The preamble indicated that substantive conditions would generally be limited to imposition of “best management practices” specified in local planning documents. The proposal also established a basic structure that limited public participation to notice and comment on the proposed general permit itself.

In 1979, EPA promulgated the final regulation based on the 1977 proposal. This regulation differed in several respects from the proposal. First, the regulation provided that general permits were not restricted to specific types of discharges. Rather, the regulation provided that general permits could be used, not only for certain storm water discharges, but also for “such other categories of point sources if there are a number of minor point sources operating in a geographical area” that, among other things, “involve the same or substantially similar types of operations,” “discharge the same types of wastes,” and “would require the same effluent limitations or operating conditions.” In the preamble, EPA indicated that comments had con-

the level of effluent discharges to acceptable levels. This may well mean opting for a gross reduction in pollutant discharge rather than the fine-tuning suggested by numerical limitations.”


Id. at 6847.

Id. at 6856.

Id. In the preamble to the proposal, EPA expressed substantial concerns about the means of controlling these types of sources through NPDES permits. EPA identified controls based on “best management practices” (“BMPs”), rather than end-of-pipe technology, as a potential type of restriction in a general permit. EPA focused on area wide management plans developed under section 208 as the source of BMP requirements. Id. EPA indicated that if localities failed to undertake planning under section 208, EPA would take action to meet the goals of the Act. The preamble identified the type of action contemplated: “An alternative to this general permit program, with its reliance on planning agencies’ BMP recommendations, could be the issuance of individual NPDES permits imposing effluent limitations on the point sources identified in the agricultural and separate storm sewer categories.”


Id. In 1977, Congress amended the Clean Water Act to exclude “irrigation return flow” from the definition of point sources. Act of Dec. 27, 1977, Pub. L. No. 95-217, § 33(b), 91 Stat. 1566, 1577 (amending CWA § 502(14), 33 U.S.C. § 1362(14)). Although the 1977 proposed regulation would have included such return flows, the 1979 final did not address these sources since they were no longer subject to the NPDES permit requirement. 44 Fed. Reg. at 32,873.
vinced the agency that the “administrative flexibility of the approach” warranted its applicability to other types of sources. Second, the regulation removed any specific reference to terms or conditions in the general permit. EPA stated that this issue was covered by regulations establishing requirements for NPDES permits generally. Finally, EPA modified the provisions for public participation and coverage by allowing “interested persons” to request that a source be subject to an individual rather than a general permit. The preamble to the 1979 regulation also provided an expanded justification for the use of BMPs. According to EPA, BMPs could be included in general permits where, among other things, they are “appropriate requirements” relating to achievement of effluent limitations or they constitute “a more stringent limitation established pursuant to State law or regulations under section 301(b)(1)(C) of the Act.”

Since its adoption in 1979, the general permit regulation has been subject to a series of amendments that have expanded the scope of sources eligible for coverage under a general permit. These changes included, among others, deletion of the requirement that such sources be “minor,” allowing a single general permit to cover more than one subcategory or category of sources, authorization of use of general permits for sewage treatment works, and authorization for certain sources to be covered under a general permit without submission of a Notice of Intent. The regulation has also been modified to provide certain procedural provisions applicable to specific sources, including oil and gas exploration and production facilities, CAFOs, and certain types of storm water sources.
B. Current Regulatory Requirements

EPA’s specific regulatory requirements for general permits are currently found at 40 C.F.R. § 122.28.88 This regulation specifies the scope of sources that are eligible for coverage under a general permit and establishes certain procedures regarding issuance and revocation of coverage under the permit.

1. Scope

Under section 122.28(a), the scope of coverage under a general permit is defined both on a geographic basis and through specification of the categories of sources covered under the permit. The regulation provides that the area of coverage should generally be based on geographic and political boundaries, and it is common for EPA to establish the scope of a general permit on state-wide or EPA region-wide basis.89 State-issued general permits are frequently state-wide in scope.

The regulation provides wide authority to include differing categories or subcategories of sources under a single general permit. Under the regulation, differing sources can be covered under a single general permit as long as the sources: (1) involve the same or substantially similar types of operations; (2) discharge the same types of wastes or engage in the same types of sludge use or disposal practices; (3) require the same effluent limitations, operating conditions, or standards for sewage sludge use or disposal; (4) require the same or similar monitoring; or (5) in the opinion of the permit writer, are more appropriately controlled under a general permit than under individual permits.90

2. Substantive Conditions

Section 122.28 provides almost no specification of the required substantive limitations in a general permit. As noted, EPA had previously stated that the regulatory requirements that are applicable to all NPDES permits apply to general permits.91 Section 122.28 merely requires that a general permit “clearly identify the applicable conditions for each category or subcategory of dischargers or treatment works treating domestic sewage covered by the permit.”92 Although the regulations do not contain an explicit cross-reference to the source of those conditions, the generic requirements for conditions in EPA-issued NPDES permits93 presumably apply.

88 EPA has shifted the location of the requirements first from 40 C.F.R. § 122.48, then to 40 C.F.R. § 122.59 and finally to its current location at 40 C.F.R. § 122.28.
89 40 C.F.R. § 122.28(a)(1).
90 40 C.F.R. § 122.28(a)(2).
91 See supra note 77 and accompanying text.
92 40 C.F.R. § 122.28(a)(4)(i).
93 Id. §§ 122, 125.
Although section 122.28 is largely silent on the required substantive provisions of a general permit, in 2000, EPA added a new and curious subsection that purports to address the inclusion of “water quality based effluent limitations” (“WQBELs”) in general permits. The regulation now states that “[w]here sources within a specific category or subcategory of dischargers are subject to water quality-based limits imposed pursuant to §122.44, the sources in that specific category or subcategory shall be subject to the same water quality-based effluent limitations.”

In the preamble to the proposed regulation, EPA explained the purpose of the regulation as follows:

EPA is proposing to add this paragraph in part to clarify that general permit categories can be used to impose water quality-based limitations as well as technology-based limitations. However, paragraph (a)(3)’s requirement that sources in categories or subcategories be subject to the same water quality-based limits reflects EPA’s position that general permits should not be used to provide permit coverage to loosely grouped categories of dissimilar discharges.

Thus, EPA indicates that this provision simply reflects the pre-existing requirement that all permits, including general permits, satisfy water quality standards requirements, and suggests that the purpose of section 122.28(b)(3) is actually to limit the use of general permits for dissimilar sources.

This subsection, as written, is confusing at best. To the extent that it merely restates the requirement to include appropriate WQBELs in general permits, it is surplusage. This requirement, like the requirement to contain technology-based limitations, arises directly from the Clean Water Act and has been an undisputed requirement of all NPDES permits, whether individual or general.

To the extent that section 122.28(b)(3) requires that general permits contain some class of WQBELs applicable to a “category or subcategory” of sources derived under section 122.44, it is misleading. Section 122.44 contains EPA’s regulations applicable to the development of effluent limitations in all NPDES permits, and section 122.44(d) specifies requirements for establishing limitations based on “water quality standards and state requirements.” Although this subsection contains detailed provisions for developing WQBELs, nothing in the subsection directly addresses development of such limitations for subcategories or categories of sources. The mechanisms

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94 Id. § 122.28(a)(3); see Amendments to Streamline NPDES Regulations: Round Two, 65 Fed. Reg. 30,886, 30,890-91 (May 15, 2000).
96 40 C.F.R. § 124.44(d).
all reflect the site-specific nature of water quality standards-based restrictions.

There is one element of section 122.44(d) that could be read to authorize inclusion of categorical restrictions to comply with water quality standards. 40 C.F.R. § 122.44(d)(1)(vii)(B) contains a general requirement that WQBELs be “consistent with the assumptions and requirements of any available waste load allocation (‘WLA’) for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.”97 WLAs can be developed for categories of sources, and, as discussed below, implementation of WLAs in general permits is becoming a central part of EPA’s developing strategy for inclusion of WQBELs in general permits.98 Thus, to the extent that section 122.28(a)(3) can be said to require general permits to include WQBELs necessary to comply with the “assumptions and requirements” of WLAs, it restates an important potential source of WQBELs for general permits. Although nothing in the preamble to the regulation indicates that this was its purpose, it can, nonetheless, serve this function.

3. Procedures for Coverage

Section 122.28 itself provides no specific procedures for issuance of a general permit but cross-references the generic permit procedures specified in 40 C.F.R § 124.99 In general, the regulations in section 124 provide for issuance of a general permit following public notice, including publication in the Federal Register for EPA-issued permits, and an opportunity for comment on the terms of the proposed permit.100

Section 122.28 does provide procedures for obtaining individual coverage under a general permit. In most cases, individual sources that fall within the scope of a general permit obtain authorization by submission of a notice of intent.101 Although the general permit is required to specify the content of the NOI, the regulation provides that the notice must, at a minimum, include the legal name and address of the owner or operator, the facility name and address, the type of facility or discharges, and the receiving streams.102 As with other NPDES submissions, the NOIs must contain signature and certifications of accuracy by the submitter.103 The regulation does give the permit writer the discretion to allow for coverage under a general permit without

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98 See infra notes 154-163 and accompanying text.
99 40 C.F.R. § 122.28(b)(1). The regulation identifies no particular provisions that actually address issuance of general permits, and, in fact, applicable requirements are scattered throughout section 124. Even with an electronic copy of the regulations and a good search function, it is very difficult to identify the variety of scattered provisions that apply to general permits.
100 See id. §§ 124.10(c)(2)(i), 124.11.
101 Id. §§ 124.10(c)(2)(i), 122.28(b)(2)(i).
102 Id. § 122.28(b)(2)(ii).
103 Id.
submission of a NOI for categories of dischargers other than storm water, certain municipal discharges, and discharges from a group of “primary industries.”\textsuperscript{104}

Under section 558(c) of the Administrative Procedure Act, holders of expired federal permits that are “required by law” may continue to operate under the expired permit if they have made a “timely and sufficient” application for renewal to the agency.\textsuperscript{105} EPA’s regulations generally provide for continuance of an EPA-issued permit when, among other things, the permittee has submitted a complete and timely application for a new permit.\textsuperscript{106} The regulation does not address its applicability to general permits which do not have a mechanism for submission of an application for a new general permit. Although EPA had initially stated that the “administrative continuation” provision did not apply to permittees covered under a general permit, in a memorandum dated January 1984, EPA changed its position and asserted that permittees who had been covered under an expired general permit are authorized to operate until a new general permit is issued.\textsuperscript{107}

In \textit{Kitlutsisi v. ARCO Alaska},\textsuperscript{108} a federal district court expressly held that section 558(c) did not extend NPDES permit coverage for permittees who had previously been covered under an expired general permit. In part, the court relied on the fact that issuance of general permits is discretionary and not “required by law” and the fact that EPA regulations purported to apply section 558(c) only to individual permits. EPA subsequently issued a new general permit applicable to the sources at issue in \textit{Kitlutsisi}, and the Ninth Circuit not only dismissed the appeal as moot but also vacated the entire district court opinion.\textsuperscript{109} The issue of “administrative continuation” of expired general permits has not been subject to litigation since \textit{Kitlutsisi}, and EPA now routinely provides that dischargers previously covered under an expired general permit are authorized to discharge pending re-issuance of the expired permit.\textsuperscript{110}

4. \textit{Requiring an Individual Permit}

EPA regulations provide that the permit writer may require a source, otherwise eligible for coverage under a general permit, to apply for an indi-
individual NPDES permit.\textsuperscript{111} The regulations specify a variety of factors that justify excluding a source from coverage under a general permit, including changes in regulatory requirements, violation of the terms of the general permit, or a determination that the source is a “significant contributor” of pollutants.\textsuperscript{112} The regulations also provide that an individual source may request to be covered under an individual NPDES permit rather than the general permit.\textsuperscript{113} The regulation does not appear to provide that individual sources have a right to coverage under an individual NPDES permit; the permit writer “shall” grant an individual source’s request for coverage under an individual permit “if the reasons cited by the owner or operator are adequate to support the request.”\textsuperscript{114}

Finally, under the regulations, “interested persons” are also authorized to petition the permit writer to require that a specific source be subject to an individual rather than general NPDES permit.\textsuperscript{115} There is no mandatory language associated with this right of petition; the permit writer has discretion to grant or deny the petition.\textsuperscript{116} Nonetheless, this provision constitutes an apparently unused mechanism by which citizens could attempt to compel a permit writer to address a specific source through an individual rather than a general permit.

5. State-Issued General Permits

States have the discretionary authority to implement a general permit program that, if adopted, must satisfy the requirements of section 122.28.\textsuperscript{117} To date, forty-five states have authority to issue general permits to all or some of the point sources within the state.\textsuperscript{118} Thus, the vast majority of sources covered by general permits are subject to state rather than federally-issued permits.

EPA’s involvement in these state-issued permits is limited. EPA regulations provide a ninety day period for EPA review and comment on state-issued general permits.\textsuperscript{119} Further, statutory requirements applicable to federal actions, such as preparation of an Environmental Impact Statement under the National Environmental Policy Act or endangered species consultation under the Endangered Species Act, may not apply when a state issues a general permit.\textsuperscript{120}

\textsuperscript{111} 40 C.F.R. § 122.28(b)(3)(i). EPA procedures for implementing a determination that a source must apply for an individual permit are at id. § 124.52.
\textsuperscript{112} Id. § 122.28(b)(3).
\textsuperscript{113} Id. § 122.28(b)(2)(vi).
\textsuperscript{114} Id. § 122.28(b)(3)(iii).
\textsuperscript{115} Id. § 122.28(b)(3)(i).
\textsuperscript{116} Id.
\textsuperscript{117} Id. § 123.25(a)(11).
\textsuperscript{118} See EPA. supra note 16.
\textsuperscript{119} 40 C.F.R. § 123.44(a)(2).
\textsuperscript{120} See infra notes 287-290 and accompanying text.
C. Categories of General Permits

EPA’s general permit regulations have been modified over time to expand the scope of sources eligible for coverage under a general permit, and EPA and state NPDES permit writers have used general permits to cover large numbers and a wide variety of types of sources. Consistent with its history, however, the general permit program has focused on storm water and agricultural discharges that exist in large numbers and which raise particular problems in developing end-of-pipe effluent limitations. EPA has also used general permits extensively in coverage of offshore oil and gas exploration facilities.

1. Storm Water Discharges

The regulation of point source discharges of contaminated storm water has, since the earliest days of the NPDES permit program, posed problems for EPA. Storm water discharges are different from industrial process discharges. There is generally no specific discharge pipe to which to apply waste treatment technology, and controls of discharge generally focus on management practices to minimize contact of storm water with industrial materials or to control the flow of storm water. Additionally, large numbers of facilities are potential point source dischargers of storm water. Indeed, the general permit program itself can be traced to EPA’s initial attempt to exclude storm water discharges from the NPDES permit program.

EPA and states have generally addressed permitting of storm water discharges by issuing a series of general permits. The Multisector General Permit (“MSGP”) establishes a set of requirements applicable to storm water discharges from specified industrial categories. EPA has also issued

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121 See supra notes 81-86 and accompanying text.
123 See 40 C.F.R. § 122.26(a) (scope of storm water permit program extends to municipal storm systems and a wide variety of industrial sources of storm water).
124 EPA regulations provide for the use of General Permits for storm water discharges from industrial sources, and small municipal separate storm sewer systems, 40 C.F.R. §§ 122.26(c), 122.33(b).
a series of general permits applicable to construction activity, called construction general permits (“CGPs”). Finally, EPA has issued a series of general permits applicable to small “municipal separate storm sewer system” discharges (“MS4 GP”).

All of these general permits rely in large part on pollution plans developed by the permittees based on “best management practices” to limit the discharge of contaminated storm water. In the case of storm water from industrial sources, both the MSGP and the CGP require development of “storm water pollution prevention plans” (“SWPPPs”). In the case of the MS4 GP, smaller municipalities may be required to develop a “storm water management program” that includes certain “minimum measures” to limit the introduction of contaminated storm water into municipal storm sewer systems.

2. Concentrated Animal Feeding Operations

Concentrated animal feeding operations are generally industrial operations where large numbers of animals are kept and raised in confinement, and the large quantities of animal wastes generated at these facilities can...
create significant environmental problems.\textsuperscript{131} Although runoff from CAFOs has attributes of non-point source pollution, both the Clean Water Act and EPA regulations define CAFOs as point sources and therefore subject to NPDES permit requirements.\textsuperscript{132} EPA’s CAFO regulations place limitations on various aspects of the management of animal wastes to minimize the discharge of pollutants. Among other things, permittees are required to design containment structures to meet minimum standards and develop “nutrient management plans” that limit the rate of application of animal waste as fertilizer to reduce runoff of wastes into navigable water.\textsuperscript{133} EPA and states have issued a number of CAFO general permits to implement these permit requirements.\textsuperscript{134}

3. Offshore Oil and Gas Exploration and Production Facilities

Some of the earliest general permits were issued to the large number of offshore oil and gas exploration and production facilities operating in the Gulf of Mexico.\textsuperscript{135} EPA has also issued general permits for offshore oil and gas facilities operating offshore of California\textsuperscript{136} and Alaska.\textsuperscript{137} EPA has promulgated technology-based effluent limitations applicable to the offshore subcategory of the oil and gas extraction industry, and these effluent limita-

\textsuperscript{131} See generally NPDES Regulation and Effluent Limitation Guidelines and Standards for CAFOs, 68 Fed. Reg. 7176 (Feb. 12, 2003) (EPA permit regulations and effluent limitations applicable to CAFOs).
\textsuperscript{132} See CWA § 502(14), 33 U.S.C. § 1362(14)(2006); 40 C.F.R. § 122.23(b). EPA regulations define CAFOs based on the number of animals at the facility.
\textsuperscript{133} EPA states that runoff from land application of wastes that are applied in accordance with an NMP are “agricultural” discharges that are exempt from the NPDES permit requirement. 40 C.F.R. § 122.23(e).
\textsuperscript{135} EPA issued several general permits applicable to various portions of the Gulf of Mexico in 1981. See, e.g., Issuance of Final General NPDES Permits for Oil and Gas Operations in Portions of Gulf of Mexico, 46 Fed. Reg. 20,284 (Apr. 3, 1981). Most oil and gas facilities in the Gulf continue to operate under EPA-issued general permits. See, e.g., Final NPDES General Permit for the Offshore Subcategory of the Oil and Gas Extractions Located in Eastern Por- tion of OCS and Gulf of Mexico, 69 Fed. Reg. 76,740 (Dec. 12, 2004); Notice of Final NPDES General Permit for New and Existing Sources and New Discharges in the Offshore Subcategory of the Oil and Gas Extraction for Western OCS and Gulf of Mexico, 69 Fed. Reg. 60,150 (Oct. 7, 2004).
tions are incorporated into the general permits.\textsuperscript{138} EPA is the permit writer for all facilities operating beyond the three mile territorial sea. Either EPA or the state issues permits for sources operating within the territorial sea depending on the delegation of authority. Sources operating beyond the territorial seas are not subject to state water quality standards, and environmental quality-based conditions in permits are based on the “ocean discharge criteria” established under section 403 of the Clean Water Act.\textsuperscript{139} EPA’s general permit regulations expressly require the use of general permits for offshore oil and gas facilities except in certain cases.\textsuperscript{140}

4. Other Categories of Sources

Although most point sources subject to general permits involve storm water discharges, CAFOs, or oil and gas facilities, EPA and the states have issued general permits that apply to a wide, if not bewildering, array of other sources. These include, among others, sewage treatment facilities,\textsuperscript{141} log transfer facilities,\textsuperscript{142} petroleum bulk stations and terminals,\textsuperscript{143} water treatment facilities,\textsuperscript{144} ready-mix concrete plants,\textsuperscript{145} discharges resulting from corrective action at underground storage tank sites,\textsuperscript{146} coal mining activities,\textsuperscript{147} reject water from reverse osmosis units,\textsuperscript{148} and seafood processors.\textsuperscript{149}

\textsuperscript{138} 40 C.F.R. § 435.10-.15. EPA has also issued general permits for offshore oil and gas facilities containing effluent limitations based on case-by-case "best professional judgment" determinations. \textit{See generally} Am. Petroleum Inst. v. EPA, 787 F.2d 965 (5th Cir. 1986) (considering BAT and BCT challenge to effluent limitations contained in general permits applicable to certain Alaskan offshore oil and gas facilities).

\textsuperscript{139} CWA § 403, 33 U.S.C. § 1343 (2006); 40 C.F.R. §§ 125.120-.124 (2006). Based on a finding that the discharges will not cause “unreasonable degradation” of the marine environment, general permits can be issued without additional conditions under the ocean discharge criteria. \textit{See, e.g.}, Final NPDES General Permit for the Offshore Subcategory of the Oil and Gas Extraction for Eastern OCS and Gulf of Mexico, 69 Fed. Reg. 76,740 (Dec. 22, 2004); Final Modification of NPDES General Permit for Storm Water Discharges from Construction Activities, 69 Fed. Reg. 76,743 (Dec. 22, 2004).

\textsuperscript{140} 40 C.F.R. § 122.28(c)(1).


\textsuperscript{143} Final NPDES General Permit for Discharges from Petroleum Bulk Stations and Terminals in Texas, 64 Fed. Reg. 34,243 (June 25, 1999).

\textsuperscript{144} Final NPDES General Permits for Water Treatment Facility Discharges in the States of Massachusetts and New Hampshire, 65 Fed. Reg. 69,000 (Jan. 13, 2000).

\textsuperscript{145} Final NPDES General Permit for Discharges From Ready-Mixed Concrete Plants, Concrete Products Plants and Their Associated Facilities in Texas, 65 Fed. Reg. 2165 (Nov. 15, 2000).
IV. Issues Under the General Permit Program

The general permit program has obvious administrative advantages to EPA, states, and permittees. The permit writer, whether EPA or a state, can publish a single permit that covers literally hundreds of dischargers that would otherwise require individual permits. Avoiding the administrative burden of the individual permit issuance process, the permit writer simply receives, but does not need to review, NOIs from permittees. Permittees can obtain coverage simply by filing an NOI, and, under many of the general permits, the permittee can itself specify the “best management practices” that will govern its own operations.

This efficiency, however, comes with a cost. In many cases, general permits may be in violation of the requirements of the Clean Water Act. Several major infirmities afflict the general permit program. First, the Clean Water Act requires that most NPDES permits contain conditions necessary to meet water quality standards.150 The broad scope of most general permits, as discussed below, preclude the site-specific assessment that underlies compliance with the various elements of water quality standards, including limitations on discharges into impaired waters, special limitations on discharges from new sources, and the anti-degradation provisions applicable to “high quality” waters. Second, NPDES permits must contain applicable technology-based effluent limitations. Many general permits purport to meet this requirement by having permittees develop their own effluent limitations based on “best management practices” that are neither reviewed nor approved by the permit writer. Third, general permits may not adequately assure required public participation where neither the NOIs nor pollution control plans developed by permittees are available for public review. Finally, federally issued general permits must assure compliance with applicable requirements of the National Environmental Policy Act, Endangered Species Act, and Historic Preservation Act that themselves require a level of site-specific evaluation not readily achieved through use of general permits.

Some of the problems associated with EPA’s broad use of general permits may not be remediable without amendment of the Clean Water Act.151 Many, perhaps most, of the problems, however, can be resolved by development of proper general permit provisions. The following sections discuss each of these major issues and the statutory and regulatory problems raised by EPA’s current general permit approach. The sections also discuss some possible regulatory mechanisms that could be employed that preserve the...

150 CWA § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C) (2006); 40 C.F.R. § 122.44(d)(1). As noted, permits applicable to municipal separate storm sewer systems and offshore oil and gas facilities discharging beyond the territorial seas are not subject to state water quality standards requirements.
151 See infra note 194.
administrative advantages of general permits while better assuring compliance with the requirements of the Clean Water Act.

A. Authorizing Discharges into “Impaired Waters”

1. The Issue of Discharges to Impaired Waters

Discharges into waters not currently meeting water quality standards, so-called “impaired waters,” are subject to specific requirements under the Clean Water Act and EPA regulations. Foremost among these is a requirement that NPDES permits include “water quality based effluent limitations” (“WQBELs”) as necessary to ensure attainment of water quality standards.\(^{152}\) EPA’s process and procedures for imposing WQBELs for discharges into impaired waters are not the clearest.

First, specific WQBELs may be derived from the Total Maximum Daily Load/Waste Load Allocation process specified in section 303(d) of the Act. Under this process, states are required to identify impaired waters that will not meet water quality standards after application of all technology-based limits on point source discharges.\(^{153}\) For each impaired water, the state is required to determine the total amount of a specific pollutant that can be discharged without violating water quality criteria (the “Total Maximum Daily Load” (“TMDL”)), and then allocate the load for that pollutant among point sources (“Waste Load Allocations” (“WLAs”)) and possibly non-point sources (“Load Allocations” (“LAs”)).\(^{154}\) TMDLs are subject to review and approval by EPA. To date, a growing number of TMDLs have been approved.\(^{155}\)

A WLA specified in an approved TMDL may apply to specific sources or categories of sources, and the permit writer, using information relating to the flow and variability of an individual point source discharge, must translate the WLA into a specific end-of-pipe WQBEL.\(^{156}\) Thus, even implementation of an applicable WLA involves translation into a discharge limit based on application of site specific factors. However, in addition to consistency with the applicable WLA, EPA regulations also require that any WQBEL be

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\(^{152}\) See supra note 33.


\(^{154}\) Id. § 303(d)(1)(C), 33 U.S.C. § 1313(d)(1)(C). States are required to prepare TMDLs for those pollutants that EPA has identified as “suitable for such calculation,” and EPA has stated that all pollutants are suitable for TMDL calculation. See Total Maximum Daily Loads Under Clean Water Act, 43 Fed. Reg. 60,662, 60,665 (Dec. 28, 1978). The application of the TMDL/WLA process to “non-point” sources has been inconsistent and controversial. See, e.g., Pronsolino v. Nastri, 291 F.3d 1123 (9th Cir. 2002).


consistent with the “assumptions” of any applicable WLA. This raises
difficult problems in translating a TMDL into a WQBEL. Identification of
the WLA applicable to a specific source or categories of sources in the
TMDL document is generally straightforward, but the calculations that form
the basis for a specific WLA may involve complex formulas that include
inputs relating to in-stream flow conditions, the amount of discharges attrib-
utable to other point and non-point sources on the stream, and other factors
that affect the amount and variability of a pollutant in a water body. Identifi-
cation of these “assumptions” that form the basis of a WLA is far from
clear, and it requires technical sophistication in reviewing the TMDL docu-
tments to assess the significance of these “assumptions” to a final WLA and
WQBEL.

Second, in the absence of an approved TMDL/WLA that applies both
to the source and to the specific pollutant, permit writers must develop a
WQBEL on a case-by-case basis. Permit writers are required during the per-
mit issuance process to determine whether a proposed discharge has “the
reasonable potential to cause, or contribute to, an excursion above any State
water quality standards.” The regulations identify a number of site-spe-
cific factors to be considered in assessing the potential for such an excurs-
ion. Under EPA guidance, this may involve comparison of the “worst
case” concentrations of pollutants that may be discharged by the permittee
with the calculated in-stream concentrations of the pollutant. The permit
writer “must” include limitations that control all pollutants which the permit
writer determines meet the “reasonable potential” standard. This may be
done by imposing WQBELs that ensure that state water quality criteria will
not be exceeded outside the limit of some “mixing zone” around the dis-
charge point.

The process of both determining the need for and developing the con-
tent of WQBELs obviously does not lend itself to the general permit process.
General permits may authorize discharges by sources on a state-wide or re-
gion-wide basis and eligible sources may be authorized to discharge into
water bodies of varying water quality. EPA, in the absence of any compre-
prehensive set of policies for assuring attainment of water quality standards
requirements in general permits, has imposed a variety of differing water
quality standards provisions that relate to discharges into impaired waters.

158 Id. § 122.44(d)(1)(i).
159 Id. § 122.44(d)(1)(ii).
160 See, e.g., EPA, supra note 35, § 6.3; EPA, supra note 156, at Chapter 9.
161 40 C.F.R. § 122.44(d)(1)(i).
162 See EPA, supra note 156.
a. Exclusion of Discharges to Impaired Waters

In some cases, general permits have avoided the need to impose WQBELs by excluding from coverage any source that will discharge into impaired waters.163 This is, in some ways, a neat solution to aspects of the water quality standards issue. There are, however, a number of problems with this approach. First, such an approach places the obligation on the prospective permittee to make a determination of whether it will discharge into a designated impaired water. This information may be available in readily accessible lists, but determining eligibility for coverage may not be simple since, among other things, permittees must identify the waters into which they will discharge. Given the broad scope of the definition of “navigable waters,” it can be difficult to determine where a discharge first enters such waters, and permits may not be clear whether coverage is available for discharges into tributaries that ultimately flow into impaired waters.164 Further, no government entity reviews the determination made by the permittee, and, in the absence of this review, the potential for ineligible dischargers to claim coverage under the general permit is substantial. An error in the determination would mean that the discharger was not covered by the general permit and in violation of the Act.

Further, the approach can be both underinclusive and overinclusive. It can be underinclusive since discharges to waters that are not designated as impaired may still raise water quality standards problems. A state may not have included all waters on its designated list of impaired waters, and self-implementing exclusions have relied on published designations under section 303(d) for determining whether a water body is impaired. Furthermore, waters that are not impaired, so-called “high quality waters,” may not maintain water quality necessary to preserve their designated use.165 In other words, prohibiting coverage under a general permit for sources discharging into waters listed in a 303(d) list may not fully address the potential of sources to cause or contribute to violations of water quality standards.


164 A general permit issued by Texas for CAFOs has specific requirements applicable to land management units, areas where animal waste is applied as fertilizer, that are located within 200 feet of the main stem of an impaired segment of a water body listed as impaired on a section 303(d) list. General Permit TXG920000 (July 20, 2004), http://www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/cafo/tgx920000.pdf. As noted, the scope of “navigable waters” is subject to considerable uncertainty in response to recent Supreme Court decisions. See supra note 23.

165 See infra notes 231-235 and accompanying text for a discussion of the applicability of EPA’s anti-degradation requirements to general permits.
The approach may also be overinclusive by establishing a broader exclusion from the general permit program than is necessary to satisfy water quality standards requirements. Discharges, even new discharges, to impaired waters are not automatically prohibited under the Clean Water Act. Under the “exclusion” approach, however, sources otherwise eligible for coverage under a general permit must seek coverage under an individual permit. For a broad class of potential permittees, particularly storm water sources, this may not be a practical alternative and undermines the utility of the general permit. This is not, itself, a legal objection, but a significant practical consequence of this approach. Certainly, from the perspective of prospective permittees, a generic exclusion from a general permit of sources discharging into impaired waters has substantial problems.

b. Inclusion of Specific Technology-Based Limitations with a Water Quality Standards-Based Reopener

The requirement to include technology-based effluent limitations poses no particular conceptual problems for general permits. Where EPA has developed pollutant-specific effluent limitations that represent BAT, BCT, or NSPS, the general permit simply incorporates these limitations as enforceable obligations of the permit. Inclusion of technology-based limitations does not, however, automatically satisfy the requirement that permits include limitations necessary to ensure water quality standards are achieved. Indeed, the entire structure of the NPDES permit program is based on the premise that all point sources must meet technology-based requirements and additional, more stringent water quality standards-based limitations in those cases where technology-based limitations are inadequate.

With an inadequate nod to water quality standards obligations, some permits that contain technology-based effluent limitations also include a “reopener” provision that provides that coverage under the general permit can be withdrawn, and an individual permit required, if the discharge by a particular point source causes a violation of water quality standards. Reliance on such an after-the-fact assessment of water quality standards compliance certainly violates EPA permit regulations. Permit writers are required to determine, as part of the permit issuance process, whether a discharge has the “reasonable potential” to cause or contribute to violations of water quality standards. The regulations do not themselves allow permit writers to avoid assessing water quality standards requirements simply because there will be a subsequent review after the discharge is authorized. Although reopener

166 See, e.g., 2000 Multisector General Permit, supra note 110, at 64,811-12.
168 EPA permit guidance does, however, contain a statement that if the permit writer is unable to assess the impact of the proposed discharge on water quality standards, a permit may be issued and subsequent monitoring employed. See EPA, supra note 35, § 6.3.3. This statement, not reflected in the regulations themselves, is based on two premises. First, a permit writer must have attempted to assess the impact prior to authorizing the discharge but has
provisions may be appropriate to allow modification of the permit if subsequent information determines that there was an error in the permit issuance process, such a provision cannot be used to avoid the obligation to assess water quality standards requirements in the first place. The Clean Water Act is not based on a “discharge first, ask questions later” approach.


EPA has taken the position that implementation of Best Management Practices through a general permit will somehow satisfy water quality standards requirements.\textsuperscript{169} EPA, in 1996, published a document entitled “Interim Permitting Approach to Water Quality-based Effluent Limitations in Storm Water Permits.”\textsuperscript{170} The “Interim Permitting Approach” states that “[t]he interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards.”\textsuperscript{171} Although specifically applicable to storm water permits, this guidance is perhaps EPA’s most significant general statement regarding the means of ensuring compliance with water quality standards requirements in general permits.

In most cases, however, required BMP plans must contain technological and economically feasible management practices that will minimize the discharge of pollutants, and the obligation to develop these BMP plans is justified as a form of technology-based limitation under the Clean Water Act.\textsuperscript{172} The adequacy of a BMP plan is not assessed by whether it is in fact adequate to prevent violation of water quality standards, but by whether it

\textsuperscript{169} See, e.g., 2000 Multisector General Permit, \textit{supra} note 110 (technology-based BMPs and reopener). In the various storm water general permits, these BMP plans are called Storm Water Pollution Prevention Plans (“SWPPPs”).


\textsuperscript{171} The guidance goes on to state:

In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate. . . .

Each storm water permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits.

\textsuperscript{172} \textit{See supra} notes 36-38 and accompanying text.
appropriately includes available management techniques for control of pollutant discharges.173

Standing alone, reliance on a BMP obligation is self-evidently inadequate to assure attainment of water quality standards. The memorandum itself, and the Question and Answer materials that accompany it, focus primarily on explaining why specific numerical WQBELs are not required by the Act; there simply is no discussion of how BMPs will ensure attainment of water quality standards. Inclusion of BMPs, essentially technology-based management or process controls, can no more be said to satisfy water quality standards requirements than the inclusion of specific numerical technology-based limitations can presumptively be assumed to satisfy site-specific water quality standards requirements. In other words, although technology-based BMPs can be a technique for minimizing the discharge of pollutants, it does not follow that use of BMPs will ensure that water quality standards are met.

d. Reliance on Consistency with Total Maximum Daily Loads

EPA, in a number of permits, requires that permittees ensure that any discharge is “consistent with the assumptions and requirements of [a given water body’s total maximum daily load of pollutants].”174 In some cases, this is the exclusive water quality standards-based requirement in the permit.175 There are substantial problems with this approach. First, there are a limited number of approved TMDLs, and this permit condition does nothing to ensure compliance with water quality standards requirements in the vast number of water bodies for which TMDLs have not been approved for the pollutants being discharged.176 Thus, this provision, standing alone, seems more smoke and mirrors than substance; it creates the illusion of compliance with water quality standards requirements without, in most cases, imposing meaningful obligations.

Second, a limitation that requires individual permittees to determine whether their discharge is consistent with the “assumptions and requirements” of a TMDL is impossibly vague and inadequate as a permit obligation. Translation of an applicable WLA requirement into a site-specific effluent limitation is itself a potentially complex exercise. But compliance with the “assumptions” of a TMDL is, as discussed above, a confusing and uncertain process.177 It is one thing to require permit writers, as part of a public permit issuance process, to ensure that an NPDES permit contain con-

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173 The 2000 CGP, however, contains provisions that seem to impose a water quality-based standard for evaluation of BMP plans. See infra note 179 and accompanying text.
174 See, e.g., 2003 CONSTRUCTION GENERAL PERMIT, supra note 127, at 3.
175 See, e.g., Multisector General Permit, supra note 110.
176 TMDLs are prepared and approved on a pollutant-by-pollutant basis, and even stream segments for which there are TMDLs may not have TMDL requirements for the pollutants which the permittees actually discharge.
177 See supra note 157 and accompanying text.
ditions that are consistent with the assumptions and requirements of a TMDL; it is quite another to include that as a general obligation to be implemented by the permittees. Yet some general permits purport to satisfy water quality standards requirements by requiring individual permittees to make these assessments on their own, without government review or approval and without public participation.

At its worst, a generic requirement to comply with “requirements and assumptions” leaves the permitting and the public uncertain about the eligibility of the source for coverage under the permit and the substantive limitations applicable to the source, and results in inadequate compliance. At its best, this TMDL provision involves informal discussions between individual permittees and state water quality officials to determine what requirements apply. Certainly, there is no public participation required in this process. Given the ambiguity of the requirement to comply with the “assumptions and requirements” of a TMDL, it is difficult to know if this provision even creates an enforceable obligation.

e. A General Requirement to Comply with Water Quality Standards

Some general permits contain a generic requirement that any covered discharge not violate water quality standards. This provision on its face appears to place an enforceable obligation on the permittee to ensure compliance with water quality standards requirements. Thus, these provisions

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178 A general permit for seafood processors in Alaska, for example, simply states that “all discharges shall be in compliance with Alaska water quality standards.” The Pribilof General NPDES Permit, 64 Fed. Reg. 1010, 1014 (Jan. 7, 1999); see also Issuance of Final General NPDES Permits for Petroleum Storage and Transfer Facilities in the States of Arkansas, Louisiana, Oklahoma, and Texas, 49 Fed. Reg. 28,446 (July 12, 1984). Some state-specific requirements of the 2000 Multisector General Permit contain a provision prohibiting violation of state water quality standards. See 2000 Multisector General Permit, supra note 110, at 64,861 (requirements applicable to Arizona).

179 In most cases, this requirement is simply phrased as a general obligation not to violate water quality standards; in the 2003 Construction General Permit, the obligation seems unfortunately expressed as a requirement to develop water quality standards-based BMP plans. In addition to other requirements, the 2003 CGP imposes an obligation on the permittee to “select, install, implement and maintain BMPs at your construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards.” 2003 CONSTRUCTION GENERAL PERMIT, supra note 127, at 15 (emphasis added). This sentence seems to provide that a permittee has violated the terms of its permit if its discharge causes a violation of water quality standards. Thus, this provision seems to be an awkwardly phrased prohibition on violation of water quality standards. The very next sentence of the permit, however, raises doubts as to its meaning. That sentence states that “[i]n general” a BMP plan, the SWPPP, that is developed pursuant to requirements specified elsewhere in the permit “is considered as stringent as necessary to ensure that your discharges do not cause or contribute to an excursion above any applicable water quality standard.” Id. In a recent brief, the government dismissed the significance of the second sentence stating that “[t]he requirement articulated in the first sentence of Section 4.5.A of the CGP, however, stands on its own; if a discharger covered by the CGP fails to select, install, implement, or maintain appropriate BMPs as necessary to meet applicable water quality standards, that discharger has violated the permit.” EPA Brief, supra note 6, at 39. EPA’s response to comments on the 2003 CGP also made clear that “[n]on-attainment of a water
place the risk on permittees that, notwithstanding coverage under the general permit, they will be in violation of the permit limitation based on the water quality impact of their discharges.

The use of a generic water quality standards compliance provision has obvious advantages for the general permit program. It creates an enforceable obligation on the part of the permittee to ensure that a covered discharge does not cause in-stream conditions that exceed state criteria or otherwise violate water quality standards requirements. The provision avoids the need to develop a permit-specific limitation that will ensure compliance.

A generic water quality standards compliance provision is, however, in many ways inconsistent with the structure of the NPDES permit program. First, compliance with this permit obligation is not simply established by an assessment of the pollutants in the discharge. Rather, the quantity of a pollutant that may be discharged will vary depending on in-stream conditions. Variations in the quantity of in-stream flow, for example, may result in varying discharge obligations on the permittee; discharges that would not violate water quality standards at times of high in-stream flow may violate water quality criteria values during periods of low flow. Thus, such a generic obligation creates substantial difficulties in enforcement. Enforcement, rather than relying on the simple process of monitoring the quality of the discharge, involves assessment of in-stream quality and a subsequent “causation” step to demonstrate the conditions were caused by the discharger. This is precisely the circumstance that Congress intended to avoid when it established the NPDES permit program in 1972.180 Further, reliance on a generic water quality standards compliance obligation essentially eliminates the advantages of the “permit shield;” permittees have little certainty regarding their compliance obligations under a permit.181

At least one court has upheld the enforceability of a generic water quality standards compliance provision in an NPDES permit. In Northwest Environmental Advocates v. City of Portland,182 the majority opinion held that the CWA allowed direct citizen enforcement of water quality standards as long as the permit contained a general provision requiring compliance with such quality standard, and a demonstration that your discharge caused or contributed to that non-attainment, is a violation of the permit.” Id. at 40 (citing EPA-App. 0108 (Response 479)). Thus, the second sentence seems to have no legal consequences and would perhaps be more appropriate in a fact sheet or preamble rather than the permit itself. 180 See Gaba, supra note 17, at 1182–85.

181 See supra note 21 for a discussion of the permit shield provisions of section 402(k).

182 56 F.3d 979, 990 (9th Cir. 1995); see also Gill v. LDI, 19 F. Supp. 2d 1188, 1195 (W.D. Wash. 1998) (granting summary judgment to plaintiffs in citizen suit based on permit limitation prohibiting violation of state water quality standards). The panel in Northwest Environmental Advocates initially held that a generic water quality standards compliance provision in an NPDES permit was not enforceable in a citizen suit, but this opinion was withdrawn and superseded following rehearing. Nw. Envtl. Advocates v. City of Portland, 11 F.3d 900 (9th Cir. 1993).
standards. The court rejected the argument that water quality standards must be translated into specific effluent limitations in order to constitute an enforceable requirement of the permit. The dissent, recognizing that general water quality standards requirements can form the basis for enforceable requirements, nonetheless concluded that citizen suits were not available for violation of water quality standards unless those standards were translated into presumably more specific effluent limitations. Perhaps surprisingly, no other court has directly addressed the enforceability of a generic water quality compliance provision in an NPDES permit.

f. The Proposed 2006 Multisector General Permit

This jumble of varying provisions finds its most comprehensive expression in EPA’s proposed 2006 Multisector General Permit (“2006 Proposed MSGP”). This proposal contains a variety of different elements that create a more coherent, but still inadequate, approach to addressing water quality standards in general permits. In general, the proposal relies on three water quality standards-related components for discharges by existing sources into impaired waters. First, permittees are required to comply with any applicable TMDL requirements. If a TMDL/WLA is applicable to a specific source or category of sources, the permittee is required to adopt “all neces-


186 The proposed permit contains a separate set of water quality standards requirements applicable to “new dischargers.” *See* *PROPOSED 2006 MSGP*, *supra* note 184, at 9.

187 The proposed permit also provides that if the TMDL/WLA for the source or category of sources requires controls “more stringent” than those required by the permit, the source is ineligible for coverage. *Id.* at 8. This particular provision seems to be a tautology. Since the permit requires that permittees adopt controls necessary to be consistent with an applicable TMDL/WLA, there should be no permittees that are ineligible for coverage because the *permit* is insufficiently stringent.
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sary controls to meet that allocation.” The permit suggests that permittees contact applicable government entities to determine the required TMDL obligations. This informal process of determination is not subject to any public notice or participation and relies on no process of government approval of the permittee’s subsequent determination of their applicable requirements.

Second, in the absence of an approved TMDL, or if an approved TMDL is silent with respect to the category of sources covered by the permit, the MSGP provides that compliance with the technology-based requirements, including BMPs, “will be deemed adequate to meet the requirements for discharging into impaired waters.” EPA may “deem” whatever it wants, but that does not change the fact that EPA provides no justification for its conclusion that BMPs will ensure compliance with water quality standards. In fact, the permit relies on the unsupported presumption that compliance with technology-based limitations will satisfy water quality standards requirements on water bodies without applicable TMDLs.

Finally, the permit relies on an after-the-fact response to water quality standards problems. The proposed permit provides that if the permittee or EPA determines that a discharge causes or contributes to an exceedance of water quality standards, the permittee must take “corrective actions” and undertake monitoring. Additionally, EPA may withdraw coverage under the MSGP and require the discharger to obtain an individual NPDES permit. While these provisions are triggered by a “determination” that the discharge causes or contributes to an exceedance of water quality standards,

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188 Id. at 11. If the TMDL specifically provides a WLA of zero, then the source is not eligible for coverage. Id. at 8. The permit itself only requires that permittees establish controls necessary to satisfy the WLA; it does not require that controls also satisfy the “assumptions and requirements” of the TMDL as required by 40 C.F.R. § 122.44(d)(1)(vii)(b). See supra note 157 and accompanying text. The “Fact Sheet” accompanying the proposed permit, however, does state that permittees:

> Are not eligible for coverage under this permit for discharges of pollutants of concern to waters for which there is a Total Maximum Daily Load (TMDL) established or approved by EPA unless you incorporate into your SWPPP measures or controls, and conditions applicable to your discharge, that are consistent with the assumptions and requirements of such TMDL.


190 Id. at 10.

191 Id. at 11.

192 In a section titled “Water Quality Provisions,” the permit contains the declarative sentence that “this permit contains provisions to ensure that discharges do not cause or contribute to exceedances of water quality standards.” Id. at 9. The next sentence contains the further declarative sentence that the permit establishes technology-based BMP and numeric effluent limitations. Id. at 9–10. One assumes that EPA is claiming that it is generally the technology-based limitations that are the source of controls to prevent exceedance of water quality standards.

193 Id. at 10.

194 Id.
the permit does not require that the permittee evaluate whether such exceedances are occurring.

The proposed permit consolidates many of the worst elements of EPA’s past approaches: reliance on TMDL/WLA requirements determined, not in the permit, but through private assessments by the permittee; an assumption that in the absence of an approved TMDL, compliance with technology-based limitations, including a BMP obligation, satisfies water quality standards requirements; and use of a reopener provision as an alternative to determining whether a source has the “reasonable potential” to violate water quality standards requirements prior to permit issuance.

2. Resolving the Impaired Waters Issue

The biggest challenge facing use of general permits is ensuring compliance with water quality standards. Both the statute and EPA regulations require inclusion of WQBELs where necessary to ensure compliance with water quality standards. Under EPA regulations, this requires that the permit writer either ensure compliance with any applicable WLA/TMDL or make a case-by-case determination of any necessary WQBELs. These requirements are extremely difficult to reconcile with the broad authorization to discharge contained in general permits.

Any approach under the current statute has serious limitations.194 A permit condition that flatly prohibits any discharge that violates water quality standards in some sense resolves this problem. But such a solution has enormous enforcement problems and leaves the permittee with no certainty and no protection under the permit shield. A limitation of the scope of a general permit that excludes discharges into impaired waters or waters without TMDLs would, without any other change to the NPDES program, drastically restrict the utility of general permits.

There may, however, be alternative approaches that achieve many of the administrative advantages of general permits in a manner that better satisfies the requirements of the Act. As an alternative to, or in addition to, a general prohibition on violation of water quality standards for discharges into impaired waters, EPA could satisfy the requirements of the Clean Water

194 One possible statutory amendment could facilitate use of general permits without significantly compromising the basic protections of the Clean Water Act. Under section 402(p), discharges from municipal separate storm sewers are subject only to technology-based BMP requirements; industrial storm water discharges are, in contrast, subject to “all applicable requirements” of sections 402 and 301. CWA § 402(p)(3), 33 U.S.C. § 1342(p)(3) (2006). Amending the statute to provide that both industrial and municipal storm water discharges are subject only to technology-based requirements, including available BMP controls, would avoid the problem of compliance with site-specific water quality standards obligations. This would not substantially affect control of water pollution from storm water discharges since existing permits almost exclusively rely on imposition of technology-based BMP-based controls as the effective control mechanism. This exemption would apply only to discharges of storm water unmixed with industrial process water.
Act by replacing its current approach of issuing broadly applicable general permits with a system that relies on three classes of permits: (1) De Minimis Discharge General Permits; (2) TMDL-based General Permits; and (3) a new class of individual “Expedited Standard NPDES Permits.”

a. De Minimis Discharger General Permits

Under EPA regulations, water quality standards-based provisions are required in NPDES permits only if the permit writer determines that the discharger has the “reasonable potential” to cause or contribute to excursions above water quality standards. It is the finding of “reasonable potential” that is the trigger that requires inclusion of WQBELs in NPDES permits.

Relying on this trigger, EPA could issue a class of general permits that need not include water quality standards-based limitations if the permit writer makes an affirmative determination, supported by the administrative record of the general permit, that the covered point sources do not meet the “reasonable potential” standard. In other words, general permits could apply to a class of de minimis discharges without violating water quality standards requirements of the Act.

Obviously this would restrict the scope of general permits, but it need not eliminate their use. There are several elements that would support a conclusion that discharges authorized by a general permit would not “cause or contribute” to violation of water quality standards. First, the potential impact on water quality standards is to be assessed after application of technology-based effluent limitations, including BMPs. Sources that effectively eliminate all but de minimis discharges of pollutants through application of technology-based limitations might be authorized under general permits without additional water quality standards-based requirements. Small area construction projects might be a suitable candidate for such a general permit determination.

196 The 2003 CGP actually has a provision that purports to provide a limited exemption from permitting for certain small construction activities disturbing between one and five acres, 2003 Construction General Permit, supra note 127, at 5. Under the terms of the 2003 CGP, these small construction activities may be “waived from the NPDES permitting requirements detailed in this general permit” if, among other things, the operator documents that (1) there is an approved TMDL which determines that controls on small construction activities are not necessary to protect water quality or (2) for non-impaired waters only, if the operator “can develop an equivalent analysis that determines allocations for his small construction site for the pollutant(s) of concern or determines that such allocations are not needed to protect water quality.” Id. at D-2 (emphasis added). EPA’s storm water regulations purport to authorize this exemption. 40 C.F.R. § 122.26(b)(15)(i)(B) (2006). This provision apparently exempts a source from all NPDES permit requirements, both technology-based and water quality standards-based. The Clean Water Act does not generally authorize exemptions from NPDES permit requirements based on water quality considerations, but this exemption may be justified under the special provisions applicable to storm water discharges. Section 402(p) exempts a storm water discharge from NPDES permit requirements unless, among other things, it is
Second, the potential impact on water quality standards could be assessed on a pollutant-by-pollutant basis. Stream segments are designated as impaired because specific pollutants exceed criteria values. Two different types of permit provisions could ensure that a discharge does not contribute to violation of standards for those pollutants. First, the permit could prohibit the discharge of the specific pollutants for which a water body has been classified as impaired. This is an approach contained in the 2006 proposed MSGP for “new dischargers.”\(^{197}\) Alternatively, the permit could prohibit the discharge of those pollutants in excess of criteria values. Discharges containing pollutants at concentrations that are below criteria values would actually lower in-stream concentrations for those pollutants. Either provision would support a conclusion that the sources subject to the general permit will not have a reasonable potential to cause or contribute to violation of standards.\(^{198}\)

The central element of a de minimis general permit approach is the obligation that EPA justify, in the administrative record of the general permit, the basis for its conclusion that sources subject to the permit will not “cause or contribute” to violation of water quality standards. If an individual source did, in fact, cause water quality problems, a reopener provision could require that the source obtain an individual permit.

b. TMDL General Permits

For “non-de minimis” point sources, EPA should not allow discharges into impaired waters under a general permit unless the point sources covered by the permit are subject to an applicable WLA in an approved TMDL. Discharges into water bodies without TMDLs or which do not contain allocations applicable to the point sources simply could not be authorized through general permits. Further, since the scope of any non-de minimis general permit would be limited to water bodies having TMDLs, the general permit itself would contain the applicable effluent limitations that are derived from the “assumptions and requirements” contained in the TMDL. Thus, the permit writer would be responsible for determining applicable WLA/TMDL requirements through the public notice and comment process employed in development of the general permit.

The TMDL process was intended to be the vehicle through which states allocate required pollution reductions among existing sources and between classified as a discharge associated with “industrial activity.” CWA § 402(p)(1)-(2)(B), 33 U.S.C. § 1342(p)(1)-(2)(B) (2006). EPA’s regulatory “waiver” is contained as part of its definition of “discharges associated with industrial activity from small construction activity” and thus may be justified as an exercise of EPA’s authority to define the scope of the NPDES permit obligation itself, 40 C.F.R. § 122.26(b)(15), rather than a water quality waiver for a source otherwise subject to the NPDES permit program.

\(^{197}\) See infra notes 215-217 and accompanying text.

\(^{198}\) A prohibition on discharge of pollutants for which a water body has been found to be impaired does not assure that a source will not “cause or contribute” to violation of water quality standards. A major discharger might cause a violation of standards for other pollutants. Nonetheless, such a provision would provide support for a de minimis determination.
new and existing sources. As has been widely noted, the TMDL process has never been properly implemented by EPA or the states, and this has ensured that water quality standards concerns were either addressed on a permit-by-permit basis or not addressed at all. EPA can establish new incentives for states to establish TMDLs and ensure compliance with water-quality-standards-based requirements for impaired waters if it generally limits the use of general permits to non-de minimis discharges into water bodies that have applicable TMDLs. At a minimum, this would result in new political pressure by permittees on states to adopt TMDLs.

c. Expedited Standard NPDES Permits

For all other dischargers, EPA could develop a system that provides most of the advantages of general permits while still providing for sufficient individualized assessment to satisfy the requirements of the Act. EPA could publish documents essentially identical to general permits that serve, not as the applicable permit itself, but as proposed standard permits that would apply following a process of individual permit issuance. Such a proposed permit would define the scope of dischargers eligible for coverage, the applicable effluent limitations, and standard permit conditions.

Issuance of an individual NPDES permit to those discharges that are included within the scope of the standard permit would be subject to an expedited process. Rather than submit an NOI to the permit issuer, prospective permittees could submit an abbreviated permit application, essentially containing the information now contained in NOIs, but also including any necessary BMP plans, for review by permit writers. Thus, one of EPA’s primary rationales for development of general permits, the difficulty of developing effluent limitations for storm water and agricultural discharges, would be addressed by requiring the permittee to submit its proposed BMP plans prior to authorization to discharge.

EPA could develop expedited procedures that would authorize a short administrative review period, and, in the absence of a determination of deficiency or the need for additional water quality standards-based restrictions, the permittee would be authorized to operate under the terms of the standard permit. The document issued to the permittee could be no more than its individual NPDES permit number and an obligation, established by explicit cross-reference, to comply with the terms of the published standard permit. In cases where more stringent requirements are appropriate, EPA could either require the discharger to apply through the normal individual NPDES permit process or include more stringent requirements as a supplement to the standard permit conditions.

As discussed above, EPA has rejected the need to apply the formal adjudicatory requirements of the Administrative Procedure Act when issuing NPDES permits. The otherwise applicable minimum procedural requirements contained in the Clean Water Act are limited to public notice of the permit application and an opportunity to request a public hearing on the proposed permit, and EPA could establish specific procedural provisions applicable to expedited standard permits that easily meet these requirements.

Proper government review would require an assessment of whether the proposed permittee falls within the scope of the expedited standard permit and otherwise meets the eligibility criteria and whether any permittee-developed plans comply with the substantive requirements of the permit. Most crucially, such a process would require the government to determine, before a permittee is authorized to discharge pollutants, whether additional water-quality-standards-based restrictions are necessary. At a minimum, this would require the government to formally determine that no additional conditions are necessary. It would also provide an opportunity for citizens to comment on the permit application and raise specific water quality concerns.

Reliance on general permits creates a presumptive authorization to discharge and limits public involvement to the submission of petitions requesting the government to exclude a discharger from coverage under the general permit. Expedited permit issuance, although not perhaps ideal, strikes a better balance between the administrative efficiency concerns of government and prospective dischargers and the individualized review that may be required.

B. New Dischargers on Impaired Waters

1. The Problem of New Dischargers

For waters not yet meeting water quality standards, the addition of new pollutant loads from new sources or from expansion of existing sources raises difficult problems. Any such new discharges can be considered to

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200 See supra note 39.
201 The requirement for public notice could be satisfied by web posting of notice of permit applications or through the existing mechanisms of public notice of individual permits. The opportunity for a public hearing would simply reflect existing EPA regulations that provide for a public hearing if there is significant public interest. See supra notes 41-43 and accompanying text for a discussion of EPA’s existing regulatory requirements for public participation in permit issuance.
202 Nomenclature on this issue is somewhat confused. The term “new source” is a term of art under the Clean Water Act and refers to sources that, in most cases, are constructed after the promulgation of national new source performance standards. CWA § 306(a)(2), 33 U.S.C. § 1316(a)(2) (2006); 40 C.F.R. § 122.2 (2006). In other words, a newly constructed source will be classified as an “existing source” unless EPA has previously promulgated an applicable new source performance standard. The term “new dischargers” has, for various reasons, been defined by EPA to include facilities that did not discharge pollutants until after August 13, 1979, which have never received an NPDES permit and are not otherwise classified as a “new
“cause or contribute” to violation of the standards since any additional discharge makes it that much more difficult to improve water quality to levels that satisfy water quality standards. While the Clean Air Act has elaborate provisions relating to the permitting of new or modified major stationary sources in areas not meeting air quality standards, the Clean Water Act has no comparable provisions. In fact, EPA has largely ignored the problem of the impact of new or expanded dischargers on water quality standards.203

EPA regulations address the problem of new dischargers on impaired waters in two ways. First, EPA authorizes states to include growth allowances in TMDLs.204 Such a growth allowance reserves some portion of the authorized pollutant load for use by later dischargers. This approach, if properly implemented, would impose additional obligations on existing sources to preserve the option for discharge by new sources. Although authorized by EPA regulations, states are not required to include growth allowances and EPA has provided no guidance on their use. Second, EPA has a curious regulation that seems to prohibit the permitting of new dischargers in the absence of a growth allowance or specifically applicable WLA. This regulation prohibits issuance of an NPDES permit to any new dischargers on impaired waters if their discharge will “cause or contribute to the violation of water quality standards.”205 The regulation further provides that if a load allocation has been performed, the permittee has the burden of demonstrating the existence of adequate remaining allocations to allow for the new discharge.206 If this provision were implemented as written, it would essentially preclude issuance of NPDES permits to all new significant dischargers in the absence of an authorized TMDL containing either a growth allowance or an applicable WLA.

That may be what it says, but that is not how it has been implemented by EPA. Section 122.4(i) was first promulgated in 1983 and has largely been ignored since then.207 It was not until the early 2000s that the implications of this provision began to be felt. In several cases, courts have indicated that section 122.4(i) precludes issuance of NPDES permits to new sources of pollution to impaired waters until states adopt TMDLs.208 In Friends of the

source.” 40 C.F.R. § 122.2. This article will use “new dischargers” to refer to sources that have not previously received an NPDES permit, regardless of whether technically classified as a new or existing source.

203 See generally Gaba, supra note 28.
204 See 40 C.F.R. § 130.2(h) (defining waste load allocation to include “existing or future” discharges).
205 Id. § 122.4(i).
206 Id.
208 In Arkansas v. Oklahoma, 503 U.S. 91 (1992), the Court upheld EPA’s issuance of an NPDES permit in Arkansas that had the potential to affect compliance with water quality standards in Oklahoma. In doing so, the Court endorsed an EPA position that the Clean Water Act did not absolutely preclude issuance of permits to new sources that may theoretically cause violation of state water quality standards. Arkansas v. Oklahoma, however, involved compliance with an absolute prohibition on degradation applicable to a Class 3 Outstanding National Resource Water, under Oklahoma’s anti-degradation provision. Neither EPA nor the
Wild Swan v. EPA,\textsuperscript{209} the Ninth Circuit, expressly relying on section 122.4(i), upheld a district court order that, according to the court of appeals:

restricts the issuance of new permits or increased discharges for WQLSs [water quality limited segments, i.e., impaired waters], which are already in violation of state water quality standard [sic]. This comports with the regulatory requirement precluding issuance of new permits for new sources that will cause or contribute to a violation of water quality standards.\textsuperscript{210}

At least one other court has read section 122.4(i) to prohibit issuance of NPDES permits to new dischargers in the absence of an applicable TMDL.\textsuperscript{211}

EPA has not, however, responded to these cases by issuing any general policy statements regarding its interpretation of the requirements imposed by section 122.4(i). In a recent brief, EPA has taken the position that section 122.4(i) prohibits the permitting of new dischargers only if there is no applicable WLA and the permit writer concludes that the discharge will “cause or contribute” to violation of water quality standards.\textsuperscript{212} This seems a correct statement of the regulation, but begs the question of the circumstances in which a new discharger will not cause or contribute to violation of standards in impaired waters. Certainly, EPA cannot avoid the requirements of section 122.4(i) simply by failing to make a determination of whether the discharger will meet the “cause or contribute” standard.\textsuperscript{213}

The problem of new dischargers on impaired waters applies to all NPDES permits, whether individual or general, but given the scope and number of sources potentially authorized, the impact of section 122.4(i) is particularly problematic under a general permit. To date, general permits have not directly addressed the implication of this provision. General permits that exclude coverage for sources discharging into impaired waters would seem to avoid the problem. General permits that include a flat prohibition on violation of water quality standards would also seem to be consist-

\begin{itemize}
\item \textsuperscript{209} See Sierra Club v. Hankinson, 939 F. Supp. 872, 874 (N.D. Ga. 1996) (requiring compliance with the requirements of section 122.4(i)); see also San Francisco Baykeeper v. Browner, 147 F. Supp. 2d 991, 995 (N.D. Cal. 2001) (identifying section 122.4(i) in context of a review of whether EPA has a non-discretionary duty to develop TMDLs where state has failed to provide adequate submission).
\item \textsuperscript{210} EPA Brief, supra note 6, at 50. Section 122.4(i) places an affirmative obligation on the discharger to document it will not “cause or contribute” to a violation unless the permit writer “waives” this requirement. This waiver is authorized only if the permit writer affirmatively determines that it already has sufficient information to evaluate the request. 40 C.F.R. § 122.4(i)(2) (2006).
\item \textsuperscript{211} EPA Brief, supra note 6, at 50.
\item \textsuperscript{212} Id. at 724.
\item \textsuperscript{213} Id. at 724.
\end{itemize}
EPA’s 2006 Proposed MSGP purports to implement the requirements of section 122.4(i). The proposed permit, explicitly citing section 122.4(i), provides that “new dischargers” into an impaired water for which there is no approved TMDL must demonstrate that their discharge will not “cause or contribute” to violation of water quality standards by either (1) eliminating exposure to storm water of any pollutant for which the water body is impaired or (2) obtaining “written clarification” from the relevant state or tribal authority that the proposed discharge “is not expected to cause or contribute to violation” of water quality standards. The proposal provides that this “notification” must be included in the “storm water pollution prevention plan” that the source must maintain on-site. These new discharger provisions of the proposed permit apply to any source that has not previously been covered under an NPDES permit. All dischargers, whether existing or new dischargers, must comply with the “assumptions and requirements” of any approved TMDL.

Under this proposed permit, new dischargers of pollutants are thus authorized on impaired waters in three circumstances. First, new dischargers are authorized to discharge into streams with approved TMDLs if they comply with the applicable WLA. This is the requirement that applies to all sources discharging into water bodies with an approved TMDL. Second, new dischargers are authorized to discharge into impaired waters without an approved TMDL if they, in effect, eliminate any discharge of those pollutants for which the stream is impaired. No discharge of the pollutants presumably means the source could not be causing or contributing to a violation of standards.

Lastly, the permit authorizes a discharge into impaired waters without an approved TMDL if the permittee obtains “written clarification” from a state agency that its discharge will not cause or contribute to a violation of water quality standards. EPA provides no guidance on the circumstances under which a state may determine that a new discharger, discharging pollutants for which the water is impaired, will not “cause or contribute” to a violation of water quality standards.

See supra notes 163-165 and accompanying text for a discussion of prohibition of discharge to impaired waters, and notes 178-183 and accompanying text for a discussion of a prohibition on violation of water quality standards.

PROPOSED 2006 MSGP, supra note 184, at 9.

Id.

Id. at 11.

Id. at 9. It is important to note that the permit does not prohibit discharges that violate water quality standards; it only requires that the permittee obtain state “clarification.” If the permittee obtains “written clarification” stating that the discharge does not have the “reasonable potential” to “cause or contribute” to violation of water quality standards, the “permit shield” should insulate the permittee from liability if its discharges in fact contribute to violations of water quality standards. Thus, this “clarification” approach is substantially different from a prohibition on discharges violating water quality standards.
violation under section 122.4(i). As noted, EPA’s guidance on issuance of individual permits suggests a rather complex modeling process to determine whether a discharge has a “reasonable potential” to “cause or contribute” to violations of water quality standards. In the context of a new discharger it is hard to imagine that any discharge of pollutants at concentrations that exceed some de minimis impact on water quality or, alternatively, at levels that exceed water quality criteria can ever be said not to cause or contribute to violations.

Rather shamelessly, the permit purports to place on state agencies the responsibility to consider the individual requests by each new discharger and to make individualized determinations of the effect of those dischargers. Thus, EPA has shifted the administrative burden of permit writing from itself to state agencies. If a new discharger requests a state determination, it seems to be precluded from discharging under the general permit until it receives some specific determination by the state. This will result in either gridlock or lip service authorization for discharge.

Perhaps worse, the permit relies on some mechanism of informal contact with the state to satisfy the substantive water quality standards requirements. The permit merely requires “written clarification” from the state; it specifies no procedures regarding how this clarification is to be obtained. Much like its requirement for assuring that permittees satisfy the “assumptions and requirements” of a WLA, the permit substitutes a private, informal process to determine the substantive requirements of the permit.

2. Resolving the New Discharger Issue

Issuance of NPDES permits to new dischargers into impaired waters raises special problems for compliance with water quality standards. Section 122.4(i) seems to impose a prohibition on issuance of permits to significant new sources/new dischargers in the absence of an applicable TMDL. Section 122.4(i) has, however, largely been ignored for the last twenty-five years. The issues associated with new dischargers are not unique to general permits, and EPA needs to develop a coherent policy and meaningful regulations independent of the general permit program.

At this point, section 122.4(i) is something of a time bomb. The uncertainties regarding its scope and applicability make any permit approach

220 See supra notes 158-162 and accompanying text.  
221 In the context of the “anti-degradation” requirements, EPA has stated that the prohibition on “degradation” of high quality waters need not apply to any theoretical degradation resulting from increased pollutant loads from new dischargers but may be applied only to discharges that result in some undefined class of “significant degradation.” See Gaba, supra note 28, at 681-84. Perhaps similar logic may restrict the scope of a determination that a discharge will “cause or contribute” to water quality standards violations.  
222 Proposed 2006 MSGP, supra note 184, at 9.  
223 See supra note 157 and accompanying text.  
224 See supra note 208 and accompanying text.
problematic. If this section is taken as written and as recently interpreted by
the courts, general permits simply cannot authorize the discharge by new
dischargers into impaired waters unless (1) there is an approved TMDL that
provides a specific WLA or growth allowance for sources covered by the
permit; or (2) the permit writer determines that the new dischargers will not
“cause or contribute” to violations of water quality standards.

The approach suggested above with regard to the general problem of
authorizing discharges to impaired waters would also help resolve the issue
of new dischargers in general permits. Both “De minimis” and “TMDL-
based” general permits should satisfy the specific requirements of section
122.4(i). An “Expedited Standard Permit” would shift to the permit writer
the responsibility to determine whether individual sources would cause or
contribute to violations of water quality standards.

C. Authorizing Discharges Under the Anti-Degradation Policy

1. The Problem of Anti-Degradation

The third problem for general permits involves compliance with an
EPA-mandated “anti-degradation” policy. Under this anti-degradation pol-
icy, a version of which is included as an enforceable element of all states’
water quality standards, permit requirements vary depending upon the classi-
fication of the water body into which the source is discharging. Tier 1
waters are basically “impaired waters” subject to the requirements discussed
above. Tier 2 waters are “high quality” waters with water quality better
than necessary to meet the statutory goal of “fishable/swimmable” uses. In
general, discharges into Tier 2 waters that will result in “significant deg-
rada in the source of water from which the source is taking water.

Tier 3 waters are

225 Id.
discussion of the elements of EPA’s anti-degradation policy.
227 The anti-degradation policy adds the additional requirement that no discharge can re-
sult in loss of an existing use. 40 C.F.R. § 131.12(a)(1). The classification of waters by “tiers”
was applied by EPA to clarify the regulatory requirements contained in section 131.12. See
generally EPA, WATER QUALITY STANDARDS HANDBOOK, EPA-823-B-94-005a, at 4-1 to -2
ch4.pdf; see also Gaba, supra note 28, at 672-73.
228 40 C.F.R. § 131.12(a)(2); EPA, supra note 226, at 4-2. The Tier 2 requirements apply
to waters that exceed levels necessary to support propagation of fish, shellfish, and wildlife
and recreation in and on the water. This level of water quality is identified as a statutory goal
229 40 C.F.R. § 131.12(a)(2). EPA has never fully defined what level of degradation will
trigger Tier 2 requirements; it has, however, authorized state requirements that apply Tier 2
review only where a discharge will result in “significant degradation” of water quality. See
notice of proposed rulemaking). EPA has stated that “[a]pplying antidegradation requirements
those designated by the state as “outstanding national resource waters” ("ONRWs"). Degradation of Tier 3 waters is absolutely prohibited.230

The application of the anti-degradation policy is, at best, obscure, and EPA has provided little guidance on a number of fundamental questions. These questions include, among others, the standards that are to be applied in classifying water bodies as Tier 2 “high quality” waters; the determination of what constitutes “significant degradation” that will trigger anti-degradation review; and the criteria for determining whether a discharge is justifiable as “necessary to accommodate important economic and social development.”231 Indeed, it is fair to say that the anti-degradation policy itself has little substantive content.232 Rather, it triggers a political process by mandating more elaborate public participation procedures and requiring permit writers to publicly acknowledge the trade-off of water quality for economic development.

Until recently, general permits have largely ignored the special issue of compliance with anti-degradation requirements. In some, the permit has excluded coverage for those permittees discharging into a Tier 3 ONRW.233 Such a permit condition, enforceable only by the permittee’s own identification of the status of the water into which it will discharge, is fine as far as it goes; if properly implemented by the permittee it should satisfy the specialized requirement for Tier 3 ONRW waters. But as far as it goes isn’t very far. Designation of waters as ONRWs is at the discretion of states,234 and it presumably applies to only a small portion of waters to which general permits may apply.

The 2006 Proposed MSGP has a broader, if vague, approach to compliance with anti-degradation requirements. The proposed permit states that “[n]ew dischargers, as defined in Appendix A, are not authorized for discharges that do not comply with the applicable State or Tribal anti-degradation policy only to activities that will result in significant degradation is a useful approach that allows States and Tribes to focus limited resources where they may result in the greatest environmental protection.” Id.; see also Gaba, supra note 28, at 677-84.

230 40 C.F.R. § 131.12(a)(3).
231 See Gaba, supra note 28, at 671-88.
232 EPA, for example, has generally rejected the position that the anti-degradation policy mandates imposition of additional controls on point sources or non-point sources on Tier 2 waters beyond those technology-based controls already required. Id. at 687. But see Columbus & Franklin County Metro. Park Dist. v. Shank, 600 N.E.2d 1042 (Ohio 1992) (holding that anti-degradation policy requires imposition of limitations equivalent to new source performance standards on new discharger). Only the application of the anti-degradation policy to discharges into Tier 3 waters, waters that the state has designated as ONRWs, has a significant substantive component. Degradation of water quality in Tier 3 ONRWs is absolutely prohibited. See Gaba, supra note 28, at 674. Even this substantive component is ambiguous since the extent of degradation which will trigger the Tier 3 prohibition is unclear. Beyond this, EPA has acknowledged that designation of ONRWs is at the discretion of the states and cannot be mandated as a requirement of the Clean Water Act. See id. at 674 n.134.

233 See, e.g., 2003 Construction General Permit, supra note 127, at 18-19 (outlining requirements imposed by New Mexico prohibiting new discharges into Outstanding National Resource Waters).
234 See Gaba, supra note 28, at 674 n.134.
tion policy for water quality standards.”235 In other words, permittees are not authorized to operate under the general permit unless someone determines that the discharge will comply with the applicable anti-degradation policy. No further detail is provided. The Fact Sheet accompanying the proposal does not even mention this provision.236

The requirement is, on its face, simply silly. The elements of compliance with the anti-degradation policy involve a number of difficult factual conclusions, public participation requirements and substantive political judgments by the permit writer. The permit provides no information about how these issues are to be resolved. Apparently this is to be done by each permittee through some unidentified and informal contact with the state to determine whether the water into which the point source will discharge is classified as high quality and whether the discharge will result in sufficient degradation to trigger anti-degradation review.

Even if it were possible to assume that these potentially difficult technical issues could easily be resolved and documented, the anti-degradation policy requires a public process in which the permit writer makes the political judgment of whether the discharge is “necessary to accommodate important economic or social development.” This requirement, by definition, cannot be satisfied by private, informal contact with state or tribal officials.

2. Resolving the Anti-Degradation Issue

The anti-degradation provisions of water quality standards, if properly addressed, pose no conceptual barrier to the use of general permits. Discharges into Tier 3 ONRWs should simply be prohibited under a general permit. The anti-degradation procedural requirements applicable to Tier 2 “high quality” waters must be met, but compliance, perhaps unfortunately, does not require any additional substantive restrictions on dischargers. As noted above, the anti-degradation requirements applicable to Tier 2 waters essentially provide a mechanism—public participation and state certification of the need for the discharge—that ensures political attention to the permit process.

What the general permit process must include is proper public notice that the general permit may authorize discharges into Tier 2 waters in order to provide minimal satisfaction of the public review process required for such discharges. Further, the final general permit must contain a determination that authorization of the discharge is necessary for “economic and so-

235 PROPOSED 2006 MSGP, supra note 184, at 9. The MSGP defines a “new discharger” as “an operator applying for coverage under this permit for discharges not covered previously under an NPDES general or individual permit.” Id. at A-3.

cial development.” This would reflect a formal state determination for state-issued general permits. For federally-issued general permits, EPA should require states to provide such a determination for the administrative record. This may be currently necessary through the state certification requirements of section 401.237

D. Development of Effluent Limitations by the Permittee

1. The Problem of Unreviewed, Unapproved Permittee-Developed Plans

Under section 402 of the Clean Water Act, the permit writer, whether a state or the EPA, is responsible for including necessary technology-based effluent limitations in NPDES permits.238 Based on the information developed as part of the individual permit process, the permit writer must determine the applicable technology-based standards and include appropriate effluent limitations as enforceable provisions of the NPDES permit.239 In those categories where EPA has promulgated national technology-based limits, the inclusion of the requirements in a general permit raises no particular problems. The general permit will simply specify the applicable limitations.

Many general permits, however, do not contain specific technology-based limitations. Rather, the permits contain an obligation for the permittees themselves to develop plans based on “best management practices” (“BMPs”) specifying how they will limit the discharge of pollutants. Although the general permit may contain requirements relating to the elements of the plans, the actual content of the plan is determined by the permittee.240 In most cases, these permittee-developed plans are neither reviewed nor approved by the permit writer prior to authorization for discharge under the general permit.

The use of these permittee-developed plans is, in many ways, inherent in the concept of general permits. As noted, the original rationales for development of the general permit program focused on two factors: the particular problems of regulating storm water and agricultural point sources and the

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238 The EPA Administrator is required to “prescribe” permit conditions. CWA § 402(a)(2), 33 U.S.C. § 1342(a)(2); see also 40 C.F.R. § 122.43(a) (stating that in addition to mandatory conditions included in all permits, the director of the permit program “shall establish conditions, as required on a case-by-case basis, to provide for and assure compliance with all applicable requirements of CWA and regulations”)

239 In the absence of nationally promulgated technology-based limits, permit writers must engage in a case-by-case determination of applicable limitations based on “best professional judgment.” See supra note 31.

240 These plans take various forms, including “storm water pollution prevention plans” (“SWPPPs”) in most storm water construction and multi-sector general permits, the implementation of “minimum measures” in municipal storm water permits, and “Nutrient Management Plans” in CAFO general permits.
administrative burdens associated with issuance of large numbers of NPDES permits. The reliance on unreviewed, permittee-developed plans reflects both of these concerns. In most cases, the character of storm water and agricultural discharges make use of end-of-pipe effluent limitations difficult, and EPA therefore depends on operational restrictions based on BMPs to control the discharge of pollutants from storm water discharges and CAFOs. In most cases, general permits rely on the selection by the permittee of appropriate BMPs based on their specific conditions. The issue of administrative burden suggests why these self-selected plans are generally not reviewed by permit writers prior to the permittee being eligible for coverage under the general permit. Individualized review of permittee plans would require vastly more resources by the permit writers and require submission of substantially more information as a predicate for coverage under the general permit. In other words, development of site-specific BMPs by the permittees allows broad coverage by the permit with minimum use of resources by the permit writer.

Administrative practicality and efficiency do not, however, automatically translate into legality, and both the Ninth and Second Circuits have rejected the provisions of two different general permit schemes that rely on unreviewed, permittee-developed plans. In Environmental Defense Center v. EPA, environmental petitioners challenged aspects of the EPA general permit applicable to small municipal separate storm sewer systems (“MS4 GP”). In the MS4 GP, EPA implemented the statutory requirement that MS4s reduce pollutants to the “maximum extent practicable” through a provision that required permittees to select and implement a set of “minimum measures” to minimize the discharge of pollutants from the storm water system. These minimum measures, essentially a set of BMP restrictions, were to be selected by the permittee from a list of potential BMPs identified in the general permit. The minimum measures selected by the permittee were neither submitted for review by EPA nor was their adequacy ever evaluated by EPA. The only check on the adequacy of the plans was the possibility that, after authorization for discharge under the general permit, EPA might determine a plan was inadequate and require revision.

The environmental petitioners argued that reliance in the general permit on these permittee-selected limitations constituted a “failure to regulate” by EPA, and the court agreed. The court apparently found no general obligation for EPA to review the Notice of Intent submitted by permittees as a prerequisite for coverage under the general permit. The court noted that in most cases

241 See supra part III.A.
242 344 F.3d 832 (9th Cir. 2003).
243 Municipal storm sewers are subject to unique permit requirements under the Clean Water Act. CWA § 402(p)(3)(B)(iii), 33 U.S.C. § 1342(p)(3)(B)(iii) (2006). This section requires that permits for municipal storm water discharges, unlike all other point sources, include restrictions that will ensure that discharges will be limited to the “maximum extent practicable.” In effect, Congress replaced otherwise applicable technology-based and water quality standards-based requirements with a single technology-based obligation to control discharges. See supra note 128.
the NOI constituted no more than “formal acceptance of terms elaborated elsewhere.”

The court, however, held that the permit writer was obligated to review and approve permittees’ BMP plans since these defined the substantive obligations under the permit. Citing only to section 402(p)(6) of the Clean Water Act, the court concluded that Congress “unambiguously” intended that all NPDES permits contain controls that reduced discharges to the maximum extent practicable. EPA’s failure to review the permittees’ decisions regarding the content of any plan meant that EPA had not ensured that the provisions applicable to individual permittees ensured reductions to the maximum extent practicable. According to the majority, “misunderstandings” or “misrepresentations” by permittees could result in their developing plans that might reduce discharges “far less than the maximum extent practicable.” The court concluded that EPA’s discretionary authority to review the adequacy of plans did not save the permit scheme; according to the court, every permittee must be subject to adequate controls and this could apparently only be ensured by EPA’s review of every permittee’s self-selected plan. One judge, in dissent, found that the provisions of the Clean Water Act regarding the requirements for general permits were ambiguous, and therefore concluded that, under principles of *Chevron* deference to administrative interpretation of ambiguous statutes, EPA’s position should be upheld.

*Waterkeeper Alliance v. EPA* involved a challenge both to EPA’s effluent limitation guideline regulations and the general permit provisions applicable to CAFOs. One element of the regulations was a requirement that permittees develop a “nutrient management plan” (“NMP”) that would limit the amount and rate of application of animal wastes as fertilizers. For point sources operating under a CAFO general permit, the NMPs developed by permittees, like the “minimum measure” plans at issue in *Environmental Defense Center*, were not subject to regulatory review or approval prior to the authorization to discharge under the general permit. Like the court in *Environmental Defense Center*, the court in *Waterkeeper* concluded that this violated the requirements of the Clean Water Act.

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244 *Envtl. Def. Ctr.*, 344 F.3d at 853.

245 In a curious footnote, the court states that “EPA identifies no other general permitting program that leaves the choice of substantive pollution control requirements to the regulated entity. . . .” Id. at 856 n.33. In fact, there are a number of significant general permits that rely on unreviewed, permittee-developed plans to establish substantive controls. Both the Construction and Multi-Sector General Permits require permittees to develop SWPPPs that contain the BMPs that will be employed at the sites. 2003 CONSTRUCTION GENERAL PERMIT, supra note 127, at 9; 2000 MULTISECTOR GENERAL PERMIT, supra note 110, at 64,812-13. The CAFO General Permit requires permittees to develop site-specific nutrient management plans. Thus, the holding in *Environmental Defense Center*, although limited to small MS4s, has potentially broad implications for EPA’s General Permit program.

246 *Envtl. Def. Ctr.*, 344 F.3d at 855.

247 399 F.3d 486 (2d Cir. 2004).

248 Id. at 502. The court noted that the Clean Water Act requirements applicable to CAFOs differed from the specific requirements applicable to municipal storm water discharge under
The court in *Waterkeeper* relied on two distinct rationales in reaching this conclusion. First, the court concluded that the Clean Water Act required that the permit writer “ensure” that NMPs result in necessary reduction in discharge. Plans prepared by the permittee might, in the court’s view, be inadequate and not “in fact” produce reductions in discharges required under the Act. The court cited with approval the language of the opinion in *Environmental Defense Center* that unreviewed, permittee-developed plans could be based on “misunderstanding or misrepresentation.” The court rejected EPA’s argument that the NMPs were not effluent limitations, but simply “planning tools.” Whether the NMPs themselves or the obligation to prepare NMPs contained in the general permit constituted effluent limitations, the court concluded that government review of the plans was necessary to ensure that permittees “in fact” met the requirements of the Act. The court also rejected EPA’s argument that the guidelines for developing NMPs were sufficiently specific that permittees had little discretion in designing the plans. The court concluded that in the absence of government review, permittees might still fail to prepare NMPs or develop inadequate plans.

Second, the court apparently relied on a strange structural argument relating to the permittee-developed BMP plans. The court stated that the Clean Water Act “unquestionably” requires that applicable effluent limitations must be included in the NPDES permit. Since the NMPs imposed the restrictions on the land application discharges, they met the statutory definition of an effluent limitation. It followed that the NMPs must be included in the NPDES permit itself, and thus, in the court’s view, the NMPs, separately developed by the permittee and not reviewed and not directly included in the permit by the permit writer, violated the requirements of the Clean Water Act.

The environmental concerns regarding unreviewed, permittee-developed BMP plans suggested in *Environmental Defense Center* and *Waterkeeper* are self-evident. Reliance on controls that have been developed by the very permittees who are regulated, without any process of government review prior to an authorization to discharge, seems the opposite of regulation—the fox is placed in charge of designing the security system for the chicken coop. The potential for “misunderstanding or misstatements” by permittees, recognized by both courts, is a rather polite characterization of the potential for abuse under a permit system that relies on permittees to establish their own pollution control obligations. A concern with effective...
implementation of the Clean Water Act makes review and approval of these plans by the permit writer the prudent course.\textsuperscript{250}

It is one thing to say that there are advantages to government approval of BMP plans; it is quite another, however, to say that the Clean Water Act mandates such approval. The legal analysis of the courts, in both \textit{Environmental Defense Center} and \textit{Waterkeeper}, is remarkably simplistic on this issue. The majority in \textit{Environmental Defense Center} relied exclusively on its conclusion that the \textit{permit writer} must ensure that the actual plans developed by permittees satisfy the statutory requirement for pollution reduction. The language of the statute is, however, far less direct. The Act requires that “permits . . . shall require controls to reduce the discharge of pollutants to the maximum extent practicable . . . .”\textsuperscript{251} As a purely linguistic matter, the general permit at issue explicitly required such controls. The issue before the court was whether the controls, required by the permit itself, may be developed by the permittee without prior EPA review, and the statutory language is silent on this question. The statutory language relied on by the court in \textit{Waterkeeper} to justify its conclusion is similarly limited. The Clean Water Act, although authorizing the Administrator to issue permits only “upon condition that” the “discharge” will meet applicable requirements, specifically provides that the “permits” contain conditions that are adequate to “assure compliance.”\textsuperscript{252}

The Clean Water Act requires only that the NPDES permit itself contain conditions that “ensure” compliance with the requirements of the Act, and the adequacy of permit conditions need not be judged by whether they have been reviewed and approved by permit writers. Permittees may “in fact” violate permit conditions through “misunderstanding or mischaracterization” whether or not the conditions have been reviewed and approved by permits. Permittees, for example, may misunderstand or mischaracterize the site-specific efforts necessary to meet applicable numerical effluent limitations in their permits, or the sampling and monitoring requirements of their permits. In other words, government review of permit conditions does not ensure compliance.

The mechanism that ensures compliance is the threat of sanctions for non-compliance. If a permittee that fails to develop a BMP plan, or that develops and implements an inadequate BMP plan, is subject to civil or

\textsuperscript{250} The permit writer’s imprimatur helps ensure that the plans properly implement applicable requirements. But it also is of benefit to the permittee since it gives greater certainty regarding their obligations under the permit. Indeed, if the permit writer has approved all applicable plans, the permit shield provision of section 402(k) may limit government enforcement to compliance with the approved plan. If the permit writer later determines that a plan is inadequate, the only option might be a permit modification through revision of the plan rather than enforcement for violation of the requirements of the permit.


\textsuperscript{252} Id. § 402(a), 33 U.S.C. § 1342(a).
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criminal liability, the permit can be said to assure compliance.253 The growing numbers of citizen suits relating to the adequacy or implementation of BMP-based SWPPP plans attest to the fact that unreviewed plans can be effectively enforced.254

2. Resolving the Issue of Permittee-Developed BMP Requirements

For certain types of point sources, particularly industrial and municipal storm water and CAFO discharges, site-specific BMP plans may be the most appropriate form of effluent limitation. No one disputes that permittee-developed BMP plans, if reviewed and approved by the permit writer and incorporated as an effluent limitation in an individual NPDES permit, can satisfy the requirements of the Clean Water Act. The issue is whether the Clean Water Act requires such a process. As discussed above, there is reason to question the adequacy of the analysis in both Environmental Defense Center and Waterkeeper on the legality of such provisions.

If the issue is whether the permit condition, rather than the permit writer, adequately assures compliance with the requirements of the Act, EPA must include conditions that ensure a credible threat of sanctions for non-compliance. To ensure the enforceability of permittee-developed plans, any general permit requiring an unreviewed, permittee-developed effluent limitation plan should contain at least three elements: (1) assurance that both the obligation to develop an adequate plan and the elements of the plans themselves constitute enforceable effluent limitations; (2) placement of the burden of proof on the permittee with regard to the adequacy of the plan; and (3) sufficiently specific criteria for development of the plan to allow the imposition of sanctions for failure to develop an adequate plan.

First, both the obligation to develop the plans and the contents of the plans themselves must be enforceable as an “effluent limitation” or other condition of the permit. As a condition of the permit, both the government, through its civil, criminal and administrative enforcement authority and citizens, through a citizen suit, could bring enforcement actions if plans were not developed, the plans did not meet the substantive requirements of the permit, or the permittee did not comply with its own plan.

253 Given the nature of enforcement under the Clean Water Act, the permittee can be subject to civil sanctions even if the inadequacy of the plan results from misunderstanding. Id. § 309 (a)-(b), 33 U.S.C. § 1319(a)-(b). Indeed, under the Act, criminal liability can be imposed based on negligent violations of the permit and this raises the possibility of criminal sanctions for some class of inadequately prepared plans. See id. § 309(c)(1)(A), 33 U.S.C. § 1319(c)(1)(A).
This point seems self-evident, but EPA has taken confusing positions on this issue. On the one hand, the CGP requires that permittees not only develop a BMP plan, but also that they “implement and maintain” the plan.\(^{255}\) Presumably a violation of a permittee’s own plan would constitute a violation of the permit.

On the other hand, EPA has taken the position that BMP plans are not effluent limitations but simply “planning tools.” This was the position taken by the government in Waterkeeper.\(^{256}\) In its brief in *Texas Independent Producers and Royalty Owners Ass’n v. EPA*,\(^{257}\) the government goes on at some length to claim that the BMP plans required in the Construction General Permit are simply “planning tools” used to meet the otherwise applicable substantive requirements of the permit, including compliance with water quality standards.\(^{258}\) It seems obvious that the government has made this argument to avoid the implications, both with respect to government review obligations and public participation requirements, which might arise from characterizing the BMP plans as “effluent limitations.”\(^{259}\)

The government’s argument is, however, not only substantively unnecessary; it is, as a matter of policy, affirmatively dangerous. If the BMP plan is, in fact, an enforceable “effluent limitation” under the permit, a permittee that violates its own plan faces possible sanctions. Enforcement can be based on a comparison of actual site practices with the requirements of the BMP plan. By characterizing the BMP plans as simply “planning tools,” however, the government seems to be saying that a permittee that violates its own BMP plan is not violating the permit. The government’s position suggests that even if a permittee does not comply with its own plan, there is no permit violation absent specific proof that the discharge is violating the substantive standards in the permit. In the case of the CGP, this might, for example, be discharges that violate water quality standards. This interpretation makes the BMP plans themselves meaningless and complicates enforcement.\(^{260}\)

\(^{255}\) 2003 CONSTRUCTION GENERAL PERMIT, supra note 127, at 15.

\(^{256}\) See 399 F.3d 486, 501 (2d Cir. 2005).

\(^{257}\) See EPA Brief, supra note 6, at 45. The case involved challenges to EPA’s CGP. It is discussed infra note 274 and accompanying text.

\(^{258}\) The brief states that the SWPPP, the set of BMP controls defined by the permittee, “is simply a planning tool that is intended to enhance compliance with the water quality-based effluent limitations in Section 4.5.A and other sections of the CGP.” EPA Brief, supra note 6, at 45. The government analogizes this requirement to the provisions of a typical NPDES permit that specifies a numerical limitation on a discharge but does not mandate how that number is to be met.

\(^{259}\) As noted, the Clean Water Act requires that “permits” be made publicly available. See supra note 41. If permittee approved plans are substantive components of the NPDES permit, it is hard (or at least harder) to argue that they need not be made publicly available and they need not be subject to some form of government review.

\(^{260}\) The court in *Waterkeeper* seemed troubled by the government’s planning tool argument. The court, concluding that the NMP plans at issue in the CAFO rules were “effluent limitations,” stated that

> [t]he requirement to develop a nutrient management plan constitutes a restriction on land application discharges only to the extent that the nutrient management plan
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sure compliance with the requirements of the Act, permittee-developed BMP plans must be enforceable requirements of the permit, and general permits should expressly state that the permittee plans constitute effluent limitations under the permit.

Certainly, it should not be a problem that the plans, mandated by the general permit, are not physically published as part of the general permit. With deference to the court in Waterkeeper, if the general permit explicitly cross-references the plans and establishes them as enforceable requirements of the permit, the permit in all meaningful senses “contains” the limitation. EPA regulations specifically authorize the inclusion of permit conditions through cross-reference.261 There are separate concerns, discussed below, regarding necessary public notice and public participation, but the physical location of the plans simply does not seem significant for enforcement purposes.262

Second, the burden of proof should be placed on the permittee to establish that the plans meet the requirements of the permit. Although the government or citizen in a citizen suit may have the ultimate burden of proof in establishing a violation of an effluent limitation, there are numerous examples of EPA shifting the burden of proof to a person alleging compliance with certain EPA regulatory requirements. In its regulations implementing the hazardous waste provisions of the Resource Conservation and Recovery Act, EPA places the burden of proof on a generator claiming that its hazardous wastes are recycled rather than abandoned.263 Under the Clean Water Act, EPA has expressly placed the burden of proof on any permittee claiming that non-compliance is based on an “upset.”264 Given that a permittee has an option of obtaining an individual permit in which plans may be approved by the permit writer, the election to seek coverage under a general permit should warrant placing the burden of proof on the permittee in a dispute over the adequacy of their plan to meet the requirements of the permit.

Third, the requirements for permittee-developed plans contained in the general permit must include sufficient objective criteria such that the adequacy of the plan can subsequently be assessed. In other words, it must be possible for government enforcement officials (or citizens in the context of a citizen suit) to determine whether a permittee-developed plan violates the

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399 F.3d at 502.

261 40 C.F.R. § 122.43(c) (2006).

262 See infra note 266 and accompanying text for a discussion of the public notice and public participation issues associated with general permits.

263 See 40 C.F.R. § 261.2(f) (requiring generator to demonstrate certain elements establishing recycling in any enforcement action).

264 See 40 C.F.R. § 122.41(n) (establishing an upset as an “affirmative defense” with the burden of proof on the permittee).
requirements of the permit. In Waterkeeper, the court rejected EPA’s argument that unreviewed, permittee-developed BMP plans were acceptable if there were sufficient technical criteria to limit the permittees’ discretion. In rejecting this argument the court noted that, regardless of the specificity of the requirements, they were still implemented based on site-specific conditions identified by the permittee. It was, apparently, the application of the BMP requirements to the permittee’s site-specific conditions that required government review. The court stated that the CAFO rule does not ensure that the CAFOs will “in fact” develop plans that comply with all applicable requirements.

The court, however, never addressed the issue of whether the application of the permit criteria to site-specific conditions was sufficiently clear to justify imposition of sanctions for an improper plan. In other words, the court never considered whether the threat of enforcement action for “misunderstanding or mischaracterization” was sufficient to assure compliance. It is possible to imagine a set of permit requirements that are so vague that sanctions for non-compliance would raise due process concerns. The court in Waterkeeper did not, however, base its holding on this concern, and the court simply did not consider whether technical criteria that were sufficiently detailed to allow an after-the-fact determination of the adequacy of the plan adequately “assured compliance” through the threat of sanctions.

Development of sufficiently specific criteria for assessment of permittee plans is not a simple process. EPA has used benchmark monitoring values in its MSGP to test the adequacy of BMPs imposed by the permittee.\(^{265}\) Discharges that exceed these benchmark values do not, however, constitute a violation of the permit. Violation of the benchmark values simply triggers an obligation to reassess and possibly revise the existing set of BMPs. Permittees may be able to operate for some period of time without adequate plans and without liability. After-the-fact monitoring may allow the government to require a revision of the plan, but until modified, the permit essentially imposes no substantive limitation on discharge that assures compliance with water quality standards.

The difficulty of developing enforceable effluent limitations applicable to storm water or other non-point source like discharges is one of the reasons which led to use of general permits in the first place. But if EPA, for practical and administrative reasons, cannot develop specific enforceable discharge limits, it must either develop objective criteria to assess the adequacy of permittee BMP plans or it must review and approve a permittee-developed plan prior to authorization for discharge under the permit.

\(^{265}\) See 2000 Multisector General Permit, \textit{supra} note 110, at 64,816.
E. Public Participation in the Permit Process

1. The Problem of Public Participation

A central element of the federal NPDES program is the strong emphasis on public participation. \textsuperscript{266} Several provisions of the Clean Water Act establish mandatory public participation requirements. Copies of NPDES “permit applications” and copies of issued permits must be made available to the public, and the NPDES permit issuance process must include an opportunity for a public hearing. \textsuperscript{267} Further, data on discharges must generally be made available to the public. \textsuperscript{268} Finally, private citizens have substantial rights to bring citizen suits to enforce requirements of the Act, and, with certain limitations, to intervene in government enforcement actions. \textsuperscript{269}

Although general permits themselves go through a public notice and comment process, application of the general permit to individual permittees raises three significant public participation issues: public availability of permittees’ NOIs to be covered under the general permit, public availability of any permittee-developed BMP plan, and the right to a public hearing on any permittee’s coverage under a general permit.

EPA and the courts have taken inconsistent positions on several of these issues. EPA has no general requirement that the public be given access either to NOIs or permittee BMP plans, and most general permits do not mandate public disclosure. \textsuperscript{270} Although EPA, in its 2000 and 2006 Proposed MSGP, has required that both NOIs and BMP plans be made available to the public, EPA has adopted no regulation or policy requiring that all general permits provide such public disclosure. Further, EPA has never established any right to public hearing on individual coverage under a general permit.

\begin{footnotes}
\item[266] One of the basic goals and policies of the Clean Water Act is that:

> [p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. The Administrator, in cooperation with the States, shall develop and publish regulations specifying minimum guidelines for public participation in such processes.


\item[267] See supra notes 39–43 and accompanying text.

\item[268] CWA § 308(b), 33 U.S.C. § 1318(b).

\item[269] Id. §§ 505(a)-(b), 33 U.S.C. §§ 1365(a)-(b).

\item[270] The 2003 CGP, for example, requires only that the SWPPP be available to certain government entities. See 2003 CONSTRUCTION GENERAL PERMIT, supra note 127, at 12. For the federally issued CGP, NOIs are, however, now made available through an EPA website. See EPA, View Stormwater NOIs, http://www.epa.gov/npdes/stormwater/noisearch (last visited Mar. 17, 2007) (on file with the Harvard Environmental Law Review).
\end{footnotes}
EPA’s policies on public participation have been challenged in two cases. In *Environmental Defense Center v. EPA*, 271 the Ninth Circuit case involving EPA’s MS4 general permit, environmental petitioners claimed that both the failure to provide public access to a permittee’s Notice of Intent and BMP plan and the absence of a public hearing violated the public participation requirements of the Act. The majority agreed. In the court’s view, it was the NOI, and not the general permit itself, that contained information about the substantive limitations that would be applicable to the permittee. 272 In such a case, the court concluded that an NOI was equivalent to a permit application and therefore the Act required that NOIs and plans be made publicly available and a public hearing be provided. 273

In *Texas Independent Producers and Royalty Owners Ass’n v. EPA*, 274 the Seventh Circuit rejected a similar challenge to EPA’s Construction General Permit. Petitioner Natural Resources Defense Council (“NRDC”) argued that both the failure to require that the NOIs and SWPPPs be publicly available and the absence of an opportunity for a public hearing violated the requirements of the Clean Water Act. The government claimed that neither the NOIs nor the SWPPPs constituted permit applications or permits and therefore the statutory requirements for public access did not apply. Relying on *Chevron* deference to administrative interpretations of ambiguous statutory provisions, the court simply deferred to the government’s interpretation of the Act. The court accepted as reasonable the government’s position that the notice and comment process of issuing the general permit provided adequate public participation and that mandatory hearings on each NOI would “eviscerate” the administrative advantages of general permits. 275 The court acknowledged that its position was contrary to the holding of the Ninth Circuit in *Environmental Defense Center*.

2. Resolution of the Public Participation Issues

General permits can satisfy the public participation requirements of the Clean Water Act by relatively simple changes to the program. There is simply no basis for not requiring that both NOIs and permittee-developed effluent limitation plans be publicly available. Further, no aspect of the general permit program would be providing the same standard for conduct of a public hearing that applies to individual NPDES permit issuance. With defer-

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271 344 F.3d 823 (9th Cir. 2003).
272 Id. at 853.
273 The court rejected the federal government’s argument that the Freedom of Information Act (“FOIA”) ensured the necessary public access. As the court noted, FOIA only applies to documents in the possession of the federal government, and EPA does not have all NOIs submitted to state or Tribal governments that are delegated permit issuance authority. Id. at 854.
274 410 F.3d 964 (7th Cir. 2005).
275 Id. at 978.
ence to the court’s holding in Texas Independent Producers, EPA simply
cannot justify minimizing public participation as it has. Adequate public par-
ticipation will simply not “eviscerate” the program.

a. Availability of NOIs and Permittee-Developed Plans

EPA should require that all NOIs and permittee-developed plans be
made publicly available. Both the NOIs and permittee plans contain infor-
mation and requirements that are typically included in permit applications
and permits themselves, and the Clean Water Act mandates that both these
documents be publicly available. NOIs do more than simply notify EPA of a
permittee’s intent to be covered. Several EPA general permits provide that a
permittee is not eligible for coverage until some time after submission of an
NOI.\textsuperscript{276} This period of time gives EPA the opportunity to review the ade-
quacy of the NOI and determine whether to require the permittee to submit
an individual permit application.\textsuperscript{277} Thus, the NOI serves the function of a
permit application, not a mere notice function. Further, as discussed above,
permittee-developed plans must be considered “effluent limitations” and en-
forceable elements of the permit. If the contents of the permittee-developed
plans are specifically enforceable as effluent limitations under the permit,
then it is hard to justify a conclusion that they are not part of the permit itself
and therefore required by the Clean Water Act to be publicly available.

No administrative advantage of general permits hinges on non-disclo-
sure of NOIs or permittee-developed plans. For NOIs, all that is required is
to make NOIs received by the government publicly available. EPA, for ex-
ample, now posts NOIs submitted under the CGP and MSGP on publicly
available web sites.\textsuperscript{278} EPA has also indicated that it will include such a pro-
vision in MS4 GPs in response to Environmental Defense Center.\textsuperscript{279} Ensuring
public access to permittee-developed plans would also be administratively simple to implement. All that would be necessary is to in-
clude in the general permit a requirement that permittees make such plans
available to the public upon request. EPA has included such a provision in its

\textsuperscript{276} See, e.g., 2003 Construction General Permit, supra note 127, at 5 (permittees not
eligible for coverage until seven calendar days after acknowledgement of receipt of the NOI is
posted on EPA’s website). The 2000 MSGP provides that coverage begins two days after post-
marked date of submission of the NOI but further provides that “[a]uthorization to discharge
is not automatically granted two days after the NOI is mailed if your NOI is materially incom-
plete (e.g., critical information left off, NOI unsigned, etc.) or if your discharge(s) is not eligi-
ble for coverage by the permit.” 2000 Multisector General Permit, supra note 110, at 64,809.
In other words, the submission of a NOI performs more than a ministerial function.

\textsuperscript{277} See, e.g., 2003 Construction General Permit, supra note 127, at 5.

\textsuperscript{278} See EPA, supra note 270.

\textsuperscript{279} See Memorandum from James A. Hanlon, Dir., Office of Wastewater Management,
EPA, to Water Management Dirs., Regions I-X, EPA, Implementing the Partial Remand of the
Stormwater Phase II Regulations Regarding Notices of Intent & NPDES General Permitting
for Phase II MS4s (Apr. 16, 2004), available at http://www.epa.gov/npdes/pubs/hanlonphase2
apr14signed.pdf.
2000 MSGP and its proposed 2006 MSGP. Although the court in Texas Independent Producers, relied, in part, on EPA’s argument that mandatory public hearings would “eviscerate” the general permit program, nowhere did it discuss any rationale advanced by EPA for the rejection of public disclosure of NOIs or permittee-developed plans.

In the absence of public disclosure of this information, the role of the public in supervision of permit issuance and enforcement, supplemental though it may be, is eliminated. No one, other than the discharger and the government, would have access to the information necessary to determine whether the discharger is eligible for coverage under the permit or has complied with the mandatory requirements for SWPPP development. Effluent limitations based on BMPs do not generate the effluent monitoring data that is otherwise subject to public disclosure under the Act. In the absence of public disclosure of the plans, any possible supervision through citizen suits is essentially eliminated.

Given the specific provisions and the role of public participation in the Clean Water Act, there is simply no rational explanation for failure to mandate public disclosure of NOIs and permittee-developed plans. Indeed, it is hard to imagine any reason for denying public access to NOIs or permittee plans other than to shield permittees from the public scrutiny that is a core element of the Clean Water Act. The alternative of relying on individual permit issuance, including any expedited standard permit model discussed above, would certainly involve public disclosure of permit applications and, if implemented properly through inclusion of the permittee-developed plan as a specific element of the permit, the plans themselves would be subject to disclosure as elements of the NPDES permit.

b. Public Hearings on NOIs

The conclusion of the court in Environmental Defense Council that public hearings must be provided as part of coverage under a general permit is more problematic. If hearings are required for each NOI, the administrative advantages of a general permit would obviously be compromised. Under EPA regulations applicable to individual NPDES permits, however, public hearings have never been available as of right for every permit application. A public hearing is held on request only if the permit writer determines that there is a “significant degree of public interest.”

As noted, this limitation...
on the right to a public hearing in the individual NPDES permit context has
been upheld by the Supreme Court.\textsuperscript{282} Providing for a public hearing on
NOIs if there is significant public interest would be consistent with the re-
quirements for individual permits and would hardly disrupt the implementa-
tion of the general permit program.

Furthermore, under its existing general permit regulations, individuals
already have the right to petition the permit writer to exclude the discharger
from coverage under the general permit, and, if excluded, the permittee
would be subject to the procedures applicable to individual permit issuance.\textsuperscript{283} Although the standards for granting a public hearing in the context
of an individual permit process and granting a petition to exclude a permittee
from coverage under a general permit differ, in both cases individuals may
request, but cannot assure, a process that includes a public hearing. The
courts in \textit{Environmental Defense Council} and \textit{Texas Independent Producers}
considered neither the discretionary nature of public hearings nor the right to
petition for issuance of individual permits in assessing the requirement for
public hearings in the general permit context.

Given the limited scope of the right to a public hearing in the context of
individual permit issuance and the availability of a right to petition to ex-
clude a source from coverage under a general permit, there seems little justi-
fication for not providing the same right to a public hearing on an NOI that
exists in the context of individual permit issuance.

\section*{F. Compliance with Other Statutory Requirements}

In addition to the substantive requirements imposed by the Clean Water
Act, the issuance by EPA of an NPDES permit may trigger obligations under
other federal statutes. The National Environmental Policy Act ("NEPA"), for
example, may require the preparation of an environmental impact statement
for certain NPDES permits.\textsuperscript{284} The Endangered Species Act ("ESA") may
require an assessment of whether the permitted activity will jeopardize the
continued existence of an endangered or threatened species.\textsuperscript{285} The National

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{282} \textit{See} \textit{Costle v. Pac. Legal Found.}, 445 U.S. 198 (1980); see also \textit{supra} note 42 and
\textit{accompanying text}. \\
\item \textsuperscript{283} 40 C.F.R. § 122.28(b)(3)(i); see also \textit{supra} note 115 and \textit{accompanying text}. \\
\item \textsuperscript{284} National Environmental Policy Act § 102, 42 U.S.C. § 4332 (2006). Only NPDES
permits issued to either municipal sewage treatment plants receiving certain federal funding or to
"new sources" may require preparation of environmental impact statements under the NEPA.
CWA § 511(c)(1), 33 U.S.C. § 1371(c)(1). The term "new source" is a term of art under the
Act and refers only to those sources constructed after promulgation of federal new source
performance standards. \textit{See supra} note 202. Thus, the applicability of NEPA even to EPA-
issued permits is limited. \\
\item \textsuperscript{285} Federal agencies must, in consultation with either the U.S. Fish and Wildlife
Department or the National Marine Fisheries Service (collectively, "the Services"), insure that any
action "authorized, funded or carried out by [any federal] agency is not likely to jeopardize"
the continued existence of an endangered or threatened species or the destruction or adverse
\end{itemize}
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Historic Preservation Act ("NHPA") may require assessment of the impact of the activity on items on the National Register of Historic Places.\textsuperscript{286} The difficulty of ensuring the necessary site-specific review mandated by these statutes in the context of a general permit is obvious.

As significant as application of NEPA,\textsuperscript{287} ESA,\textsuperscript{288} and NHPA may appear, the applicability of these statutory requirements to general permits is limited since the requirements of these statutes apply only to certain federal actions. An EPA-issued general permit constitutes federal action triggering applicable regulations of the Services require that a federal agency must undertake either formal or informal consultation with the relevant Service if the proposed action "may affect" an endangered or threatened species. 50 C.F.R. § 402.14(a) (2006). Thus EPA-issued NPDES permits may require a review of the potential impact of the permitted activity on endangered or threatened species, consultation with the appropriate federal service, and possible mitigation steps that will authorize the action. See 40 C.F.R. § 122.49(c). Additionally, under section 10 of the ESA, private parties may receive a permit authorizing actions that might otherwise constitute an unlawful "take" of endangered species. Endangered Species Act § 10, 16 U.S.C. § 1539(a).

\textsuperscript{286} The NHPA requires that the head of any federal agency having licensing authority must, "prior to the issuance of any license, take into account the effect of the undertaking" on any site, building, structure, or object that has been included or is eligible for inclusion on the National Register. National Historic Preservation Act § 106, 16 U.S.C. § 470f. EPA-issued NPDES permits may be subject to consultation obligations under the NHPA. See 40 C.F.R. § 122.49(b).

\textsuperscript{287} See, e.g., District of Columbia v. Schramm, 631 F.2d 854 (D.C. Cir. 1980); Chesapeake Bay Found. v. Virginia State Water Control Bd., 453 F. Supp. 122 (E.D. Va. 1978) (holding that NEPA obligations do not apply to permits issued by states to "new sources" and EPA's decision not to exercise its discretionary authority to veto state permits was not a "federal action" triggering NEPA requirements).

\textsuperscript{288} The Fifth Circuit has held that EPA cannot condition delegation of NPDES permit authority to states on a requirement that the state submit permits to EPA for an ESA review. Am. Forest & Paper Ass'n v. EPA, 137 F.3d 291 (5th Cir. 1998). In 2001, EPA entered into a Memorandum of Agreement ("MOA") with the Services regarding "enhanced coordination under the Clean Water Act and Endangered Species Act." Memorandum of Agreement Between the Environmental Protection Agency, Fish and Wildlife Service and National Marine Fisheries Service Regarding Enhanced Coordination Under the Clean Water Act and Endangered Species Act, 66 Fed. Reg. 11,202, 11,207 (Feb. 22, 2001). In the context of state-issued NPDES permits, the MOA essentially provides that EPA will use its authority over water quality standards to minimize impacts on listed species. \textit{Id.} at 11,215-16. Although EPA states that it will use its authority to review state-issued permits to comment on impacts of listed species, the agency limits its substantive veto authority to violations of Clean Water Act obligations. \textit{Id.} at 11,216. The implication of the MOA is that the adequacy of endangered species review in state-issued general permits is linked to the adequacy of the permit's water quality standards provisions.

There is, however, continuing dispute over whether EPA's review and approval of a state NPDES permit program is itself subject to ESA review and the extent to which the ESA provides substantive authority to take action not otherwise authorized by the Clean Water Act. In \textit{Defenders of Wildlife v. EPA}, 420 F.3d 946 (9th Cir. 2005), \textit{cert. granted}, 127 S.Ct. 853 (Jan. 5, 2007) (No. 06-549), the Ninth Circuit held that EPA's delegation of permit authority to Arizona was arbitrary and capricious, in part because EPA had relied on inconsistent legal positions regarding the applicability of the ESA consultation process to state delegation. \textit{Id.} at 959-60. The court found that the ESA contained a grant of authority, independent of the Clean Water Act, that required EPA to ensure that delegation did not jeopardize the continued existence of listed species. Although it disagreed with the logic of \textit{American Forest & Paper Ass'n, supra}, the court stated that it was not directly faced with the same issue addressed in that case, i.e., EPA's ability to impose continuing ESA consultation requirements as a condition of state delegation. \textit{Id.} at 971.
application of these statutes. However, following delegation of permit issuance authority to states, courts have generally held that NPDES permit issuance is no longer a federal action.\footnote{See, e.g., Schramm, 631 F.2d at 862; Chesapeake Bay Found., 453 F. Supp. at 125.} Thus, state-issued general permits may not be subject to NEPA, ESA, and presumably NHPA requirements. Since EPA is the permit issuer in only a handful of states, the application of these statutory requirements to general permits is limited.\footnote{See supra note 16.} Further delegation will only diminish the significance of these statutes further.

Nonetheless, in the limited context of EPA-issued general permits, the problem of compliance remains, and EPA has struggled with the proper mechanism for ensuring that an EPA-issued general permit complies with the requirements of these statutes. EPA’s treatment of its NEPA obligations in these general permits is interesting. The CGP simply does not apply to “new sources” as defined in the Clean Water Act, and thus the EIS requirements of NEPA do not apply.\footnote{See 2003 CONSTRUCTION GENERAL PERMIT, supra note 127, at C-1 to -2; supra note 284.} Statutory new sources wishing to be covered by the 2000 MSGP, however, must submit an “environmental information document.”\footnote{Final Reissuance of NPDES Storm Water Multi-Sector General Permit for Industrial Activities, 65 Fed. Reg. 64,746, 64,612 (Oct. 30, 2000) (fact sheet).} EPA is to use this information to conduct an environmental review under NEPA to determine whether an EIS is required and whether any environmental mitigation obligations are necessary. This process must be completed prior to submission of the NOI by the permittee.\footnote{Id.} Obviously, EPA’s obligation to review and make site-specific determinations regarding the applicability and obligations under NEPA undercuts its general position that site-specific review of information in an NOI would “eviscerate” the general permit program. On the other hand, the scope of new source EIS review under the Clean Water Act is limited.

EPA, in its recent CGP and MSGP permits, has imposed rather elaborate review obligations on the permittee to satisfy the provisions of the ESA and NHPA. Under both the CGP and MSGP, EPA requires the prospective permittee to undertake, prior to submission of an NOI, a review of whether its storm water related activities may affect endangered or threatened species or designated critical habitat. Permittees are not eligible for coverage unless they certify in the NOI that their activities meet one of several criteria. These criteria include, among others, (1) a determination by the permittee that there are no endangered or threatened species or critical habitat in the project; (2) completion of formal or informal consultation between the permittee and Fish and Wildlife Service regarding the potential to jeopardize an endangered or threatened species; and (3) coverage under a section 10 “incidental take” permit issued by FWS.\footnote{2003 CONSTRUCTION GENERAL PERMIT, supra note 127, at 4-5; 2000 Multisector General Permit, supra note 110, at 64,808–09.} Much like its procedures that purport to sat-
Isfy water quality standards requirements, the general permit does not provide for review by EPA of the determinations made by the permittee.

In *Texas Independent Producers*, the NRDC challenged the adequacy of the procedures in the CGP to satisfy the ESA. Among other things, NRDC claimed that the ESA required independent assessment of compliance by EPA. The court accepted EPA’s position, however, that submission of an NOI and development of an SWPPP by the permittee did not constitute “federal action” that triggered ESA requirements. It further concluded that EPA satisfied its ESA obligations when it undertook consultation as part of the issuance of the CGP itself, developed the provisions in the CGP relating to endangered species review in consultation with the Service, and received concurrence by the Service that the General Permit was not likely to adversely affect a listed species.

Although the court in *Texas Independent Producers* concluded that the ESA does not apply to individual authorization under a federally issued general permit, the application of the ESA to individual permittees is still significant. Since EPA has made endangered species review a prerequisite to permit coverage, a prospective permittee who does not properly undertake such a review should be subject to government enforcement and citizen suits under the Clean Water Act. Furthermore, information relating to the existence of endangered species should be a basis for a petition requesting that a prospective permittee be required to obtain an individual permit. This may be an appropriate resolution of the issue in the limited context of federally issued general permits.

V. CONCLUSION

General permits have been part of the NPDES program beginning with the promulgation of EPA’s first general permit regulations in 1979. Since that time, thousands of point sources have been authorized to discharge subject only to the substantive and procedural requirements of such permits. EPA has expanded its reliance on general permits over the years without, it appears, addressing the substantial legal and policy issues that are implicated by their use. The recent series of cases that potentially undercut the basis of general permits is a testament to this inattention.

Some of the troubling aspects of general permits are easily resolved. EPA must simply assure that EPA and state-issued general permits provide for public access to Notices of Intent and any permittee-developed effluent limitation plans. Effective review and enforcement of compliance with Clean Water Act requirements require this minimal level of public participa-

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295 410 F.3d at 979. According to EPA, “[s]ubmitting an NOI is simply a notification to EPA” and does not constitute a federal action authorizing discharge. EPA Brief, supra note 6, at 64.

296 410 F.3d at 979.
tion. Further, reliance on permittee-developed effluent limitations based on “best management practices” seems an appropriate means of implementation of technology-based obligations in general permits. If the permit requirements are sufficiently definite and the plans are enforceable as effluent limitations, the potential for enforcement by government and citizen suits should adequately assure that the plans are both properly developed and adequately implemented. Government review of these plans prior to permit coverage would certainly be useful, but may not be required under the Clean Water Act.

The most troubling aspect of the broad use of general permits is EPA’s failure to adequately assure compliance with water quality standards. EPA’s most recent proposed approaches either effectively ignore water quality standards or provide lip service through requiring permittees, rather than the permit writer, to identify these complex and confusing requirements based on informal contacts with regulators. Rather than encouraging development of TMDLs, EPA effectively discourages their development by exempting permittees from any water quality standards-based requirements on streams without approved TMDLs. Although they may limit the use of general permits, there are mechanisms available to ensure that general permits meet the water quality standards requirements of the CWA.

It is hard to dispute that there are administrative advantages, both to the government and the permittee, through use of general permits, but such efficiency considerations cannot trump the substantive requirements of the Clean Water Act.
NONDEGRADATION FOR SHORT-TERM TOXICS DISCHARGES

History of the Issue

There are occasional projects that propose to discharge effluent containing toxic pollutants to surface waters for a short duration. In the past these discharges often were not required to obtain an NPDES permit because of their short duration, and the urgency of the need for discharge. They were only required to monitor to assure the MPCA that the levels of toxic pollutants discharged did not pose an unacceptable risk to the environment. Discharges of pump tests for hazardous waste pump-out systems, and intermittent and short-term de-watering from construction sites, including those containing toxic pollutants, are examples of the type of discharge at issue. New or expanded discharges resulting in an increased loading of toxic pollutants to surface waters are subject to the nondegradation provisions of MN Rules 7050 and 7052.

Applicable Rules

*Minnesota Rules Part 7052.0310 – Nondegradation Implementation for OIRW and High Quality Waters*

Subpart 7, *Exemptions* from the nondegradation implementation procedures provides a list of three categories of items that are considered exempt from requirements in this section for carrying out a nondegradation demonstration for BCCs (Bioaccumulative Chemicals of Concern). Any action or activity that would lead to a new or increased loading of BSICs to OIRW waters and BCCs to high quality waters requires a nondegradation demonstration. OIRW applies to point sources, and BCCs in high quality waters applies to point and non-point sources. The exemptions listed in subpart 7 apply to short-term actions or activities involving BCCs, authorized bypasses, or response actions pursuant to CERCLA or Minnesota Statutes 115 B and C. Further the SONAR accompanying Chapter 7052 draws a distinction between recurring short-term activities, such as maintenance dredging, and single event activities, such as putting in bridge pilings, with the latter receiving an exemption. These exemptions are the result of adopting the GLI regulations for the Lake Superior basin in Minnesota, including distinctions drawn in producing the SONAR.

*Minnesota Rules Part 7050.0180 – Outstanding Resource value Waters - ORVW*

Since new or expanded discharges are prohibited to *ORVW prohibited* waters, this discussion applies to *ORVW restricted* waters.

Any proposed new or expanded discharge to a designated *ORVW restricted* water body resulting in an increased loading of pollutants must complete a no prudent and feasible
analysis review for the proposal. Historical application of this portion of the rule has been only for point sources covered under NPDES/SDS permits, although the rule authorizes application to point and non-point sources. The September 1988 ORVW Guidance Manual indicates those activities for which nondegradation provisions will be applied. There has been no routine application to non-point sources.

_Minnesota Rules Part 7050.0185 - All Waters_

Minnesota Rules Part 7050.0185 prescribes Agency policy for discharges of toxic pollutants to surface waters subject to the nondegradation provisions for _All Waters_. Facilities proposing a new or expanded discharge that includes increased loading of toxic pollutants to surface waters must perform a nondegradation demonstration. The trigger for a nondegradation review for _All Waters_ is based on either: 1) a new or increased discharge volume of 200,000 gpd that results in an increased loading of the toxic pollutant; or 2) an increase in the discharge of a toxic pollutant that increases the baseline background concentration in the receiving water by more than one percent.

The SONAR to the current nondegradation provisions of Chapter 7050 addressed temporary discharges in a very general sense in regard to the significance test for toxic substances. It did not place any context on a timeframe that would be considered temporary. Subsequently, GLI rulemaking for the Lake Superior basin addressed short term, temporary discharges by applying specific context and criteria for exemptions.

_Recommended Procedure_

Non-BCCs (non-bioaccumulative toxic pollutants), subject to Chapter 7050 nondegradation provisions for _all waters_ and ORVW _restricted_ waters, are considered exempt from nondegradation requirements that meet those criteria listed in Part 7052. 0310, subpart 7. This procedure would be applied statewide, including the one-time discharge distinction raised in the Chapter 7052 SONAR and assuming water quality standards are maintained for the waterbody in question. This would assure consistency in that non-BCCs would not be treated more stringently than BCCs, which the MPCA regards as presenting a greater degree of environmental risk. This course of action would also be consistent with the intent of the implementation procedures for Chapter 7050 that apply to significant discharges which “may be expected to adversely and measurably impact the existing uses, aquatic habitats, and the _long term level_ of water quality necessary to protect these uses.”
Iowa Antidegradation Implementation Procedure

Iowa Department of Natural Resources
Water Resources Section

February 17, 2010
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Glossary

**Alternatives Analysis:** An evaluation of reasonable alternatives for regulated activities that might degrade water quality, including less-degrading alternatives, non-degrading alternatives, and no-discharge alternatives, such as treatment process changes, relocated discharge facilities, land application, reuse, and subsurface discharges.

**Antidegradation:** A regulatory policy and implementation procedure to protect existing uses of surface waters and to specify how IDNR will determine, on a case-by-case basis, whether and to what extent, existing water quality may be lowered in a surface water.

**Assimilative Capacity:** The amount of contaminant load that can be discharged to a specific water body without exceeding the numeric water quality criteria associated with a pollutant of concern (POC). Assimilative capacity is used to define the ability of a water body to assimilate a discharged substance without impairing beneficial uses.

**Beneficial Uses:** All existing and designated uses on or in surface waters of the state.

**Degradation:** A decline in the chemical, physical, or biological conditions of a surface water as measured on a pollutant-by-pollutant basis.

**Designated Use:** A beneficial use assigned to a water of the state as shown in the Water Quality Standards – (IAC 567 – 61.3(1)).

**Existing Use:** Beneficial uses actually attained in a surface water on or after November 28, 1975, whether or not the uses are designated in the water quality standards.

**Existing Water Quality:** A characterization of selected pollutants of concern in a surface water as measured and expressed during a specified time period.

**Less-Degrading Alternative:** A reasonable alternative to a proposed discharge or change to an existing discharge that would result in less degradation to water quality than an alternative that protects existing uses.

**Minimum Level of Pollution Control:** Controls required to protect existing uses and to achieve the highest statutory and regulatory requirements for the waters under evaluation.

“**Necessary**”: No reasonable alternative(s) exist to prevent degradation.

**Non-Degrading Alternative:** A reasonable alternative to a proposed or existing discharge that would not result in degradation of water quality as characterized by the existing water quality assessment.

**Outstanding Iowa Water (OIW):** A surface water that IDNR has classified as an outstanding state resource water in the water quality standards. An OIW receives Tier 2 ½ protection.

**Outstanding National Resource Water (ONRW):** A surface water that IDNR has classified as an outstanding national resource water in the water quality standards. An ONRW receives Tier 3 protection.
Pollutant of Concern: Pollutants of concern for antidegradation reviews include only those pollutants which are reasonably expected to be present in the discharge and may reasonably be expected to negatively affect the beneficial uses of the receiving water.

Regulated Activity: includes any activity that requires a permit or a water quality certification pursuant to the following federal laws: 1) CWA § 402 NPDES permits, 2) CWA § 404 dredge and fill permits, 3) any activity requiring a CWA § 401 certification.

Social and Economic Importance (SEI): The social and economic benefits to the community that will occur from any activity resulting in a new or expanded discharge.

Temporary and Limited Degradation: Degradation that is not permanent. The effects can be regarded as temporary and limited following a review of all of the following factors, if applicable:
- a) length of time during which water quality will be lowered
- b) percent change in ambient conditions
- c) pollutants affected
- d) likelihood for long term water quality benefits to the water body
- e) degree to which achieving the applicable Water Quality Standards during the proposed activity will be at risk
- f) potential for any residual long term effects on existing uses

Tier 1 Review: Policies and procedures that prohibit degradation which results in the loss or impairment of a beneficial use or violation of water quality criteria and that prohibit degradation of existing water quality where pollutants of concern are at or violating applicable water quality standards. Tier 1 protection applies to all surface waters regardless of existing water quality as the minimum protection level.

Tier 2 Review: Policies and procedures that prohibit degradation of a surface water unless a review of reasonable alternatives and social and economic considerations justifies a lowering of water quality or the lowering of water quality is temporary and limited. Tier 2 protection level applies to all surface waters where existing water quality is better than applicable water quality standards as determined on a pollutant-by-pollutant basis.

Tier 2 ½ Review: Policies and procedures that prohibit any lowering of water quality in unique waters as identified in the water quality standards unless the lowering is temporary and limited, results from expansion of existing sources, or serves to maintain or enhance the value, quality, or use of the OIW, as determined by the Director of IDNR on a case-by-case basis.

Tier 3 Review: Policies and procedures that prohibit any lowering of water quality in unique waters as identified in the water quality standards unless it is temporary and limited, as determined by the Director of IDNR on a case-by-case basis. Any proposed activity that would result in a permanent new or expanded source of pollutants is prohibited.

Water Quality Criteria: Elements of water quality standards that are expressed as pollutant concentrations, levels, or narrative statements representing a water quality that supports a designated use.
ANTIDEGRADATION IMPLEMENTATION PROCEDURE

1 Purpose and Overview

These procedures provide guidance to persons who are responsible for the regulated activities that may degrade water quality in Iowa. Regulated activities include any activity that requires a permit or a water quality certification pursuant to the following federal laws: 1) CWA § 402 NPDES permits, 2) CWA § 404 dredge and fill permits, 3) any activity requiring a CWA § 401 certification.

The following procedures implement Iowa’s antidegradation rule found at 567 Iowa Administrative Code Chapter 61.2(2) and federal antidegradation policy at Title 40 Code of Federal Regulations (CFR) Section §131.12. The Iowa Department of Natural Resources (department) is required by 40 CFR §131.12(a) to develop and adopt a statewide antidegradation policy and to identify procedures for implementing that policy. Implementation includes:

• identifying the antidegradation review levels (i.e., the “tiers”) that apply to a surface water;
• assessing and determining water quality degradation;
• identifying and assessing less-degrading or non-degrading alternatives;
• determining the importance of economic or social development to justify degradation of waters; and
• establishing intergovernmental coordination and public participation processes.

1.1 Summary of Applicable Laws and Regulations on Antidegradation

Iowa Code sections 455B.171 – 455B.183 establish requirements for the protection and management of surface water quality. The Environmental Protection Commission, with the assistance of the department, promulgates administrative rules on water quality. Iowa’s Water Quality Standards (WQS) are specified in 567 IAC Chapter 61 – Water Quality Standards. The specific portion of the regulation prescribing the policy on antidegradation is 567 IAC Chapter 61.2(2).

The antidegradation rule is one of three required regulatory elements of the WQS. The other two elements include the assignment of beneficial uses, and water quality criteria (narrative and numeric). All of these review elements must be administered as a whole. All surface waters of the state are subject to the antidegradation rules and these procedures.

The designated uses and the applicable water quality criteria can be found in 567 IAC Chapter 61. All waters of the state are subject to general criteria contained in 567 IAC Chapter 61.3(2). All waters listed in the Surface Water Classification have beneficial uses and are subject to the specific (i.e., numeric) water quality criteria contained in 567 IAC Chapter 61.3(3) – Table 1, 2, 3a, 3b, 3c and the Bacteria Criteria Table.

Beneficial uses may vary in a water body and may change at various locations. Most waters have more than one beneficial use. Where more than one use exists, or has been designated for a water body, the use with the most stringent water quality requirements must be maintained and protected.
An antidegradation review shall be performed for the entire segment (or multiple segments) of a water body that could be degraded by a new or expanded discharge. The review may extend into more than one designated segment depending on the pollutant load within the discharge and the distance to and assimilative capacity of waters down gradient of the discharge point. The review must extend down gradient as far as degradation could occur regardless of the classification status of the receiving waters. If the potential degradation is confined within a single segment, the review may be limited to only the portion of the segment to be affected.

Waters listed in appendices B & C of this document are considered outstanding and warrant special protection. These include the state's Outstanding Iowa Waters (OIW) and the Outstanding National Resource Waters (ONRW). The degradation of water quality in an OIW or ONRW is prohibited except under specific circumstances described in Section 1.2.

All surface waters of the state are protected under at least one of four tiers of the antidegradation rule. Subsection 1.2 of this document describes these tiers and explains how the protection levels are assigned to each water. Subsection 1.3 of this document explains how the tier protection level may be revised.

### 1.2 Assigning Tier Protection Levels

The following four levels (or tiers) are designed to protect water quality from degradation in all surface waters of the state on a pollutant-by-pollutant basis. Under this approach, surface water quality might degrade for one or more pollutants of concern but be unaffected by other pollutants. The tiers are specified in rule at 567 IAC Chapter 61.2. as follows:

**61.2 Antidegradation policy.** It is the policy of the state of Iowa that:

- **a. Tier 1 protection.** Existing surface water uses and the level of water quality necessary to protect the existing uses will be maintained and protected.
- **b. Tier 2 protection.** Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the department finds, after full satisfaction of the intergovernmental coordination and public participation provisions, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the department shall assure water quality adequate to protect existing uses fully. Further, the department shall assure the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control before allowing any lowering of water quality.
- **c. Tier 2 ½ protection – Outstanding Iowa waters.** Where high quality waters constitute an outstanding state resource, such as waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.
- **d. Tier 3 protection – Outstanding national resource waters.** Where high quality waters constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. Any proposed activity that would result in a permanent new or expanded source of pollutants in an Outstanding National Resource Water is prohibited.
- **e.** The four levels of protection provided by the antidegradation policy in subsections (a) through (d) of this section shall be implemented according to procedures hereby incorporated by reference and known as the “Iowa Antidegradation Implementation Procedure,” effective
Tier 1:
Applies to all surface waters as a minimum level of protection and requires that the level of water quality necessary for existing uses be maintained and protected. Tier 1 requires that the Water Quality Standards be achieved. Tier 1 review shall prohibit degradation that may cause or contribute to the impairment of a beneficial use or violation of water quality criteria. Tier 1 protection applies to all surface waters, regardless of the existing water quality.

Assigning Tier 1 Review
Prior to allowing any new or expanded discharges of a pollutant, a Tier 1 review must be conducted and demonstrate that the discharge would not result in the loss or impairment of a beneficial use or violate the water quality criterion for that pollutant. Those pollutants that are documented as already being at or violating Water Quality Standards will receive only a Tier 1 review.

Tier 2:
Tier 2 protection applies on a pollutant-by-pollutant basis to all surface waters where existing water quality is better than applicable water quality standards as determined on a pollutant-by-pollutant basis. Tier 2 protection does not apply to intermittent watercourses and those watercourses which typically flow only for short periods of time following precipitation and whose channels are normally above the water table. These waters do not support a viable aquatic community during low flow and do not maintain pooled conditions during periods of no flow. Tier 2 review shall prohibit the degradation of water quality of a surface water unless a review of reasonable alternatives and social and economic considerations justifies the degradation in accordance with the procedures presented in this document.

Assigning Tier 2 Review
A Tier 2 review shall be conducted for new and expanding discharges to all surface waters of the state where existing water quality is better than applicable water quality standards as determined on a pollutant-by-pollutant basis, unless one of the following conditions apply:
- the water is an OIW or ONRW to which Tier 2½ & Tier 3 protection applies or,
- existing water quality is worse than the applicable water quality criteria for the pollutants of concern.

Tier 2½
Policies and procedures that prohibit the degradation of water quality of the Outstanding Iowa Waters (OIWs) as identified in Appendix B. In general, degradation of OIW from new sources is prohibited. Temporary and limited degradation of OIW or degradation caused by the expansion of existing sources may be allowed by the department on a case-by-case basis as explained in Subsections 1.2 & 2.4 of this document.

Assigning Tier 2½ Review
The department may allow limited degradation of Outstanding Iowa Waters in three situations:

1) The degradation will be “temporary and limited” as defined in Section 2.4 of this document;
2) The applicant documents that less-degrading alternatives are not available, that effects on existing water quality be minimal, and that the project will, overall, serve to enhance the value, quality, or use of the OIW (For example, a new or expanded source of wastewater treatment effluent associated with a visitor center may be authorized where reasonable non-degrading or less degrading treatment alternatives to allowing a new or expanded source are not available as determined through the alternatives analysis as outlined in Section 3); or

3) The degradation is caused by the expansion of an existing source and the applicant has conducted an alternatives analysis, selected the least degrading alternative that is “affordable” within the meaning of Section 3.2 of this document, and demonstrated the socioeconomic importance of the project as described in Section 3.3 of this document after full opportunity for public comment. In all cases, current treatment levels for existing sources should be enhanced, where possible.

Decisions regarding whether to allow degradation in an OIW under these limited situations will be made on a case-by-case basis using appropriate techniques and best professional judgment of department staff.

**Tier 3:**
Policies and procedures that prohibit any degradation of water quality of Outstanding National Resource Waters (ONRWs) as identified in Appendix C. Temporary and limited degradation of water receiving Tier 3 protection may be allowed by the department on a case-by-case basis as explained in Section 1.2 & 2.4 of this document. Any proposed activity that would result in a permanent new or expanded source of pollutants to an ONRW is prohibited.

**Assigning Tier 3 Review**
Degradation of water quality in an ONRW is prohibited except from short-term effects of temporary degradation as defined. Any proposed activity that would result in permanent new or expanded source of pollutants to any segment which has been classified as ONRW is prohibited. This prohibition applies to new sources, and expansion of existing sources that degrade water quality.

**Temporary Lowering of Water Quality for Tier 2 ½ and Tier 3**
Factors that may be considered in judging whether to allow temporary degradation of OIW & ONRW waters include:
- Percent change in ambient conditions predicted at the appropriate critical flow conditions;
- Percent change in loading (i.e. the new or expanded loading compared to total existing loading to the segment);
- Percent reduction in assimilative capacity;
- Nature, persistence, and potential effects of the parameter;
- Potential for cumulative effects; and
- Degree of confidence in the various components of any modeling technique utilized (e.g. degree of confidence associated with the predicted effluent variability).
Pollutant-by-Pollutant Basis
The level of protection afforded a water body determines the type of antidegradation review required when new or expanded discharges are proposed. Because the Tier 1 and 2 reviews are conducted on a pollutant-by-pollutant basis, this document refers to these reviews as a review of a "pollutant" as opposed to a review of the overall quality of a "water body."

For example, where a perennial surface water is impaired for one or more pollutants, and where existing water quality for other parameters is better than water quality standards, the surface water will be afforded both Tier 1 and Tier 2 protection on a pollutant-by-pollutant basis. That is, Tier 1 protection is afforded for the pollutants that are at or violating water quality standards and both Tier 1 and Tier 2 protection is afforded for pollutants for which water quality is better than the water quality standards. Tier 2 ½ & Tier 3 protection will be afforded for all pollutants of concern in Outstanding Iowa Waters (OIW) and Outstanding National Resource Waters (ONRW). Where waters have not been listed as impaired on the §303d list or as an OIW and ONRW, the presumed antidegradation protection level is Tier 2 for all pollutants of concern.

Because Tier 1 and 2 reviews are conducted on a pollutant-by-pollutant basis as opposed to on a water body-by-water body approach, the allowance for degradation of water quality through a discharge of a pollutant depends on the existing level of that pollutant within the receiving water (i.e., the existing water quality), and the probability of promptly restoring the quality where pollutants levels are elevated. The pollutants of concern may be discharged to the water body if:

1) the activity would not cause or contribute to a violation of the WQS or the loss or impairment of a beneficial use;

2) all other applicable state and federal permitting requirements are met (e.g., technology-based requirements are met);

3) the permit is issued reflecting the highest statutory and regulatory requirements; and

4) all requirements of the antidegradation policy have been met.

In the absence of information on existing water quality, waters shall automatically receive Tier 2 review prior to allowing any additional pollutants of concern that might result in a degradation of the water quality. OIWs and ONRWs that shall always be afforded Tier 2 ½ & Tier 3 protection, respectively.

1.3 Revising Tier Review Levels
The default tier review will change from Tier 2 ½ or Tier 3 to Tier 2 if the water body is no longer categorized through rule making as an OIW or ONRW. The change in a review level of an OIW or ONRW will require an opportunity for public review as outlined in Section 6 of this document.

Any person may nominate a surface water to be afforded Tier 2 ½ or 3 level of protection by filing a nomination with the department. The department considers nominations during the triennial review of surface water quality standards. The nominating party is responsible for establishing the basis for classifying a surface water as an OIW or ONRW. The nomination shall include a map and description of the surface water; a statement in support of the nomination, including specific reference to the applicable criteria for Tier 2 ½ or 3 water classification; supporting evidence that the applicable criteria are met; and available, relevant water quality data
for establishing existing water quality. The department may utilize its own data when reviewing any submitted nomination.

Using a weight of evidence approach, the department may classify a surface water as an OIW or ONRW based on a combination of the following criteria:

- Location of the surface water (e.g. on federal or state lands such as national parks or national wildlife refuges);
- The surface water has exceptional water quality as demonstrated by credible chemical data, the documented maintenance of pollutant intolerant species, or other data available to the department;
- The surface water is of exceptional ecological significance because of its unique attributes as demonstrated through detailed aquatic community assessments, population surveys, or other data available to the department;
- The surface water is of exceptional recreational significance because of its unique attributes as demonstrated by detailed information highlighting economic benefits, number of users relative to other similar waters, and exceptional water quality demonstrated by credible water quality data, or other data available to the department;
- The surface water supports threatened or endangered species or provides critical habitat for a state or federally threatened or endangered fish, mussel, or aquatic invertebrate species; and/or
- The surface water is highly aesthetic; has archeological, cultural, or scientific importance; or provides a special educational opportunity.

If the department determines that the classification of a surface water as an OIW and ONRW may be appropriate based upon the criteria described above, the department will then consider the following factors when making a decision whether to classify a nominated surface water as OIW or ONRW:

- Whether there is the ability to effectively manage the OIW or ONRW and its watershed to maintain and protect existing water quality;
- The social and economic impact that will result from Tier 2½ or 3 antidegradation protection;
- Public comments in support or opposition to the OIW or ONRW classification;
- The timing of the OIW or ONRW nomination relative to the triennial review of surface water quality standards;
- The consistency of an OIW or ONRW classification with applicable water quality management plans;
- Whether the nominated surface water is located within a national or state park, national monument, national recreation area, wilderness area, riparian conservation area, wildlife management area, area of critical environmental concern, or has another special use; and
- Any other factors the department considers relevant when making a decision whether to classify a nominated surface water as OIW or ONRW.

The criteria and factors listed above to classify and reach a decision for OIW and ONRW nominated waters are the same. However, the weight of each criteria and factor will be considered differently depending on which Tier (OIW or ONRW) the nomination specifies since the corresponding protection levels are different. In the case of an ONRW nomination, more information will be required in addition to the requirements listed above to demonstrate the water body’s importance to the nation, not just Iowa. Comparison of ONRWs from across the country.
including highly detailed data for water quality, ecological significance, recreational significance, criteria used for ONRW categorization, and any other unique factor appropriate in demonstrating national significance must be submitted.

If the department concurs with the nomination of an OIW or ONRW, the department shall hold at least one public meeting in the local area of a nominated OIW or ONRW to solicit public comment. The nomination and all other information or input collected during the nomination and consideration process will be made part of the public record. Any changes to the list of OIW or ONRW waters need to proceed through the rule making process as prescribed in the Administrative Procedures Act.
2 Iowa’s Antidegradation Implementation Procedure

This portion of the document outlines the procedure for determining whether or not degradation is allowed in surface waters of the state from regulated activities. The antidegradation review procedure is based on:

- the level of protection (i.e., Tier 1, 2, 2 ½, or 3) assigned to the pollutants of concern within the water receiving the discharge,
- the type of receiving water,
- existing water quality of the receiving water,
- the necessity of degradation, and
- the social and economic importance of the regulated activity.

All new or expanded regulated activities are subject to antidegradation review requirements. Regulated activities include any activity that requires a permit or a water quality certification pursuant to the following federal laws: 1) CWA § 402 NPDES permits, 2) CWA § 404 dredge and fill permits, 3) any activity requiring a CWA § 401 certification.

Tier 2 antidegradation reviews are required when proposed new or expanded activities will degrade water quality. In addition to reviewing the necessity for a regulated activity and the social and economic importance of the activity, the department and applicants must ensure that proposed activities fully protect beneficial uses, and achieve the highest statutory and regulatory requirements (such as application of appropriate federal effluent limitation guidelines for certain industries, secondary treatment standards for domestic wastewater and appropriate water quality based effluent limitations, where appropriate). The department must also assure that activities within the watershed are implementing cost-effective, reasonable best management practices to control nonpoint source pollution (see Section 8). Determinations issued under these provisions must be made in accordance with the public notification process described in Section 4 of this document. A decision diagram of the antidegradation review process is provided as Appendix A of this document.

2.1 Relationship of Antidegradation to Beneficial Uses and Classifications

This antidegradation implementation procedure applies to all surface waters of the state regardless of use designations or water classification. An antidegradation review must not result in the impairment of an existing or designated use.

Outstanding National Resource Waters and Outstanding Iowa Waters are antidegradation categories consistent with the implementation of the antidegradation policy in Chapter 61. These categories are separate and independent of designated and existing use provisions as stated in the Code of Federal Regulations.

2.2 Determining the Appropriateness of Degradation

To determine the required scope of an antidegradation review, the applicant shall first determine whether or not the regulated activity will result in degradation for a pollutant of concern. Pollutants of concern for antidegradation reviews include those pollutants which are reasonably expected to be present in the discharge and may be reasonably expected to negatively affect the beneficial uses of the receiving water.
Subject to the situations below, a regulated activity shall be considered to result in degradation if it authorizes a new or increased loading of any pollutant of concern.

A regulated activity shall not be considered to result in degradation, if:

- The proposed activity would neither result in a net increase in mass loading or an increase ambient water quality concentration for a pollutant of concern after mixing; or

- The activity is occurring within the design capacity of the treatment plant as specified in the existing construction permit; or

- The activity will result in only temporary and limited degradation of water quality as defined in the glossary and further described in Sections 1.2 and 2.4; or

- A permit for an existing facility proposes neither less stringent permit limits or increased treatment plant design capacity; or

- Additional treatment is added to an existing discharge and the facility retains their current permit limits and design capacity; or

- Treatment is added to a previously unpermitted discharge resulting in improvements to the receiving water, such as an unsewered community; or

- The department concludes that the proposed activity will not cause degradation based upon the specifics of any watershed-based trading that has been agreed to by the project applicant. NOTE: Because Iowa does not currently have a watershed-based trading program in place, the applicant might experience some permitting delays in pursuing this exemption unless the department is given significant advanced notice of the applicant's proposal or

- The activity is a thermal discharge that has been approved through a Clean Water Act 316(a) demonstration.

If a determination is made that degradation will occur, or it is assumed, the department will determine from information provided by the discharger, obtained from the public, or available to the department from its own sources, whether or not the degradation is necessary to allow important economic and social development in the geographic areas in which the waters are located (See Section 3 of this document).

### 2.3 Determining Existing Water Quality

Existing water quality determinations will take place primarily during Tier 2 ½ and Tier 3 reviews to determine the percent change in ambient conditions that may result from potential degradation. The department encourages applicants conducting Tier 2 reviews to proceed directly into defining the “necessity” (i.e., performing the alternatives analysis) of the discharge under Section 3 of this document assuming (instead of demonstrating) that the proposed activity will result in any degradation for each of the pollutants of concern.
Any applicant considering a new or expanded activity to an OIW shall coordinate any planning effort to determine the existing water quality with the department. The department will provide the necessary guidelines and steps for an appropriate, scientifically defensible determination.

In general, existing water quality will be based upon existing assessments conducted under department monitoring and assessment programs. Existing water quality assessments will seek to gather information only on the pollutants reasonably expected to be in discharges.

The preferred approach for assessing existing water quality is to use previously collected data where available or use statewide default background levels established by the department. Where adequate data are not available, the second preferred approach is to collect water quality data. The third preferred approach for assessing existing water quality is to use appropriate reference data where it can be shown that the reference data is likely to reflect conditions in the water body in question. Sometimes more than one approach may be needed to characterize existing water quality for all pollutants of concern.

The department can advise the applicant on what approaches may be most appropriate to establish the existing water quality. If a data collection effort is chosen, the department can advise the applicant on what data are needed and can provide guidance on how to collect and report the needed information to the department.

2.4 Temporary and Limited Degradation

Activities resulting in temporary and limited degradation will receive a Tier 1 review. The department will determine if degradation from an activity is temporary and limited following a review of information provided by the applicant. The information provided by the applicant must include:

a) length of time during which water quality will be lowered,
b) percent change in ambient conditions,
c) pollutants affected,
d) likelihood for long-term water quality benefits to the water body (e.g., as may result from dredging of contaminated sediments),
e) degree to which achieving the applicable Water Quality Standards during the proposed activity may be at risk, and
f) potential for any residual long-term effects on existing uses.
3 Pollution Control Alternatives to Degradation

An applicant proposing any regulated activity that would degrade water quality is required to prepare an evaluation of alternatives to the proposed activity. The purpose of this evaluation is to determine whether or not the proposed degradation is “necessary,” that is, no reasonable alternative(s) exist to prevent degradation. These alternatives are compared (in terms of practicability, economic efficiency and affordability) to the controls required to protect existing uses and to achieve the highest statutory and regulatory requirements (i.e., the more stringent between the water quality-based effluent limits to protect an existing use and the applicable technology-based effluent limits).

Following the evaluation of pollution control alternatives, the least degrading alternative that is practicable, economically efficient, and affordable should be considered the preferred pollution control alternative. If this alternative results in degradation, the applicant must then document the social and economic importance (SEI) of the activity according to the guidelines in Section 3.3 of this document.

3.1 Identifying Non-Degrading and Less-Degrading Pollution Control Measures

For any proposed activity, there may be a number of pollution control measures that prevent or minimize water quality degradation. For activities likely to cause degradation, applicants must provide an analysis of non-degrading and less-degrading alternatives to the minimum level of pollution control. The minimum level of pollution control is the control required to protect existing uses and to achieve the highest statutory and regulatory requirements.

The applicant shall evaluate a range of non-degrading or less-degrading pollution control alternatives with the intent of identifying reliable, demonstrated processes or practices that can be reasonably expected to achieve greater pollution reduction. The following alternatives are examples that may be considered depending upon applicability:

• Land application
• Subsurface irrigation
• Waste transport
• Groundwater recharge
• Improvements in the collection system
• Recycling or reuse (i.e., closed loop system)
• Discharge to a regional wastewater collection and treatment system
• Improved operation and maintenance of existing treatment system
• Alternative discharge locations
• Installation of biological/physical/chemical treatment processes that provide higher levels of treatment
• Seasonal or controlled discharges to avoid critical water quality periods

If experimental or unproven methods are proposed, the department may request information on previous applications of the method, effectiveness, transferability (if applicable), costs and other information as appropriate. Applications containing proposals for new or experimental methods will be required to append information regarding demonstrated performance results. Such applications may be approved at the discretion of the department with the condition that if the proposed technology does not meet project pollutant control targets, the applicant must adopt conventional or other pollution control measures that meet state antidegradation requirements.
The department may require that the applicant evaluate additional alternatives if an appropriate range of alternatives was not evaluated. Department staff and the applicant should meet to discuss these and other issues early in the process. The applicant shall also document any less-degrading alternatives that were determined to be unreasonable and provide a basis for the conclusion.

3.2 Evaluating and Selecting Alternatives

Following the evaluation of possible alternatives, the applicant must select the least degrading and reasonable alternative and provide the basis for its selection. A reasonable alternative is one that is practicable, economically efficient, and affordable. The applicant may bypass further evaluation of practicability, cost-effectiveness and affordability by selecting the least degrading alternative available.

Practicability

The practicability of alternatives is considered by evaluating the effectiveness, reliability, and potential impacts on the overall natural environment (i.e., land, air, water and energy use) resulting from implementation of the alternatives. Non-degrading and less-degrading alternatives shall be considered practicable unless an evaluation to the contrary is provided. The following are examples of the factors that may be evaluated during this process:

1) Effectiveness and Reliability

- Certainty of achieving technology-based requirements and water quality criteria to protect existing uses
- Technical feasibility of alternatives (e.g., feasibility of no-discharge options for large volumes of wastewater within dense urban areas)
- System or technology reliability, potential for upsets/accidents
- Nature of pollutants discharged
- Discharge timing and duration
- Need for low-flow augmentation
- Dilution ratio for pollutants discharged

2) Potential Environmental Impacts

- Sensitivity of stream uses
- Sensitivity of groundwater uses in the area
- Effect on endangered species
- Potential to generate secondary water quality impacts (storm water, hydrology)
- Secondary pollutants created by products of treatment

Review of these factors may be on a qualitative or quantitative basis, as appropriate. Other secondary environmental impacts should also be considered, such as the potential impact of alternatives on odor, noise, energy consumption, air emissions, solid waste and sludge generation. Other practicability factors that should be considered during the review include the technical, legal, and local considerations of the various alternatives examined. The schedule and the estimated time of completion of the project should also be provided for each alternative discussed.
Economic Efficiency

Alternatives that are deemed practicable must undergo a direct cost comparison and alternatives that impose a cost that is disproportionate to the possible environmental gain may be eliminated from further consideration. An analysis of pollution control costs, or economic efficiency, is appropriate when the applicant desires to optimize the balance between water quality benefits and project costs. General cost categories that should be considered include:

- Capital costs
- Annual operating and maintenance costs (including cost escalation)
- Other costs (one-time costs, savings, opportunity cost, salvage value)

Opportunity costs may be considered in the estimate of overall cost, as appropriate. For example, lost opportunity costs for lots in a proposed subdivision that would be used for land application rather than housing, or losses related to process changes that results in missed production runs are legitimate and may be considered if adequately documented.

In order to develop a standardized framework for projecting, evaluating, and comparing costs associated with various pollution control alternatives, applicants should use a present worth framework for reporting cost information. However, applicants may propose alternate economic demonstrations if appropriate. Alternative direct cost comparisons may be presented if the present worth calculation is complicated by the amount of difference in the effective design lives of the alternatives examined. The following calculation may be used to determine present worth:

\[ P = C + O + [A * (P/A, d, n)] - S \]

Where:
- \( P \) = Present worth
- \( C \) = Capital cost
- \( O \) = Other costs (expressed as present worth)
- \( A \) = Average annual operating cost (alternatively a gradient factor may be applied to account for cost escalation)
- \( d \) = Discount rate
- \( n \) = Useful life
- \( S \) = Salvage value of facilities and land (expressed as net worth)

\( (P/A, d, n) = \frac{[(1 + d)^n - 1]}{d(1 + d)^n} \)

The cost of each alternative is then compared to the base cost of pollution control. The base cost of pollution control is the cost of the controls required to protect existing uses and to achieve the highest statutory and regulatory requirements, i.e., the more stringent of water quality based effluent limits for existing use protection or technology-based effluent limits.

As a non-binding guideline, alternatives less than 115 percent of the base cost of the minimum level of pollution control are presumed to be economically efficient. Alternatives greater than 115 percent of the base costs should also be considered if implementation of the alternative would produce a substantial improvement in the resulting discharge. Conditions that might warrant consideration of alternatives of greater cost (above 115 percent) are the effectiveness, reliability, and environmental factors identified above. The base cost of the minimum level of pollution control is the cost of the controls required to protect beneficial uses and/or technology-based effluent limits, whichever is more expensive.
Applicants performing the direct cost comparison approach should evaluate the economic efficiency of the treatment options for each of the primary pollutants of concern related to the proposed discharge. For example, the primary pollutants of concern for domestic wastewater discharges include biochemical oxygen demand (influencing in-stream dissolved oxygen concentration), ammonia, bacteria, and other pollutants for which a waste load allocation can be reasonably determined. An applicant may need to evaluate the costs associated with one pollutant of concern if additional treatment process alternatives do not affect treatment for other pollutants of concern. An applicant can bypass the cost comparison step by choosing to implement the least degrading alternative for each pollutant of concern.

This quantitative water quality analysis is not needed when the receiving water quality is not a significant factor for a specific alternative (e.g., in-stream dissolved oxygen concentrations in relation to a no-discharge alternative). Since all alternatives analyses use qualitative and quantitative assessments of water quality benefits and treatment costs and feasibility, best professional judgment is of the utmost importance when evaluating alternatives.

**Affordability**

Following an analysis of practicability and economic efficiency, the affordability of the least degrading alternative may be assessed at the applicant’s discretion. This assessment may be used to determine if the alternative is too expensive to reasonably implement. This approach results in the selection of the least degrading alternative, while maintaining affordability to the public or private entity. *Alternatives identified as most practicable and economically efficient are considered affordable if the applicant does not supply an affordability analysis.*

The determination of affordability for public and private entities is an emerging issue nationally. As such, federal guidance has not yet been finalized. Until such time, the applicant should use the U.S. Environmental Protection Agency’s water quality standards handbook – “Interim Economic Guidance for Water Quality Standards,” EPA-823-B-95-002 (1995). This guidance document presents one set of public and private sector approaches. This interim guidance is not binding and may be replaced or supplemented with other methods of analysis, if sufficiently justified.

If the applicant determines that the least degrading remaining alternative is affordable, then it is the preferred alternative. If it is not affordable, then the affordability of the next alternative should be evaluated until an alternative is chosen that is practicable, economically efficient and affordable.

A demonstration that an alternative is not affordable should be clearly documented and should show that the alternative has a substantial adverse economic impact that would preclude the use of the alternative for the activity under review.

### 3.3 Determining Social and Economic Importance of the Preferred Alternative

If the preferred alternative identified will result in degradation to the receiving waters, then the applicant must demonstrate that the preferred alternative (or “project”) will allow important economic and social development. **Social and Economic Importance** is defined as the social and economic benefits to the community that will occur from any activity resulting in a new or expanded discharge. The applicant should use the following three steps to demonstrate the SEI:

- Identify the affected community
• Identify relevant factors that characterize the social and economic conditions of the affected community
• Describe the important social and economic development associated with the project

1. **Identify the affected community:**
The affected community is considered as the community in the geographical area in which the waters are located. The affected community should include those living near the site of the proposed project as well as those in the community that are expected to directly or indirectly benefit from the project.

2. **Identify relevant factors that characterize the social and economic conditions of the affected community:**
In order to describe the economic and social development associated with the proposed project, the applicant will first need to determine the social and economic factors that best characterize the affected community. Examples of social and economic factors include:

- Rate of employment
- Personal or household income
- Poverty level
- Population trends
- Increasing production
- Housing starts, median values, etc.
- Community tax base
- Available public services (e.g., fire department, school, infrastructure)
- Current or potential public health, safety or environmental problems

The social and economic measures identified above do not constitute a comprehensive list. Each situation and community is different and will require an analysis of unique social and economic factors. The applicant is encouraged to consider analyzing additional factors that characterize the specific community under consideration.

3. **Describe the important social and economic development associated with the project:**
Following the identification of appropriate social and economic measures, the applicant must describe the expected change in these factors that is associated with the project. The purpose of this step is to demonstrate whether or not important social and economic development will result from the project. The applicant should first describe the existing condition of the affected community. This base condition should then be compared to the predicted change (benefit or loss) in social and economic condition after the activity is allowed. The area’s use or dependence upon the water resource affected by the proposed discharge must be included in the analysis. In doing so, the applicant shall evaluate any associated environmental related benefits or costs, such as:

- Promoting/impacting fishing, recreation, tourism or other economic benefits for the community
- Reserving assimilative capacity for future industry and development

Upon the consideration of all relevant factors, the project constitutes important social and economic development if the applicant demonstrates that the project will lead to overall beneficial changes in the factors presented (i.e., increased jobs, employment, housing or other appropriate factors balanced against the benefits associated with maintaining a higher level of
water quality). This determination will be made on a case-by-case basis using information provided with the application and/or obtained from the public.

When information available to the department is not sufficient to make a determination regarding the social and economic benefits or environmental impacts associated with the proposed activity, the department may request that the applicant submit additional information.

If the department determines, after appropriate discussions with the discharger, that the SEI of the proposed activity has not been demonstrated the department shall deny the proposed activity. This decision is part of the Administrative Record of Decisions regarding antidegradation.

3.4 Summary of the Alternatives Analysis and Social and Economic Importance Process

The preceding discussion describes the approach that shall be followed by the applicant for determining whether or not less- or non-degrading alternatives to the proposed activity will be required to prevent degradation of Iowa surface waters. The following steps summarize the alternatives analysis process and other relevant actions during antidegradation reviews for Tier 2 and Tier 2 ½ protection levels:

- If it is determined that degradation would likely occur due to the proposed activity, an analysis of less degrading and non-degrading alternatives to the proposed activity will be required.

- The applicant will be required to analyze cost information for minimum level of pollution control associated with the proposed activity, alternative pollution control measures that would result in no degradation, and for other less or non-degrading alternatives as appropriate.

- The applicant shall evaluate the proposed activity, the less and non-degrading alternatives, and the practicability, economic efficiency and affordability associated with each option or mix of options.

- The applicant shall identify the least degrading alternative – or mix of alternatives – that is practicable, economically efficient, and affordable as described in this section. This will be the preferred option.

- If the preferred option (i.e., pollution control alternative or mix of alternatives) will not result in degradation of the receiving water segment, permitting of the activity may proceed.

- If the preferred option (i.e., pollution control alternative or mix of alternatives) will result in degradation of the receiving water, the applicant will be required to conduct an analysis of economic and social benefits.
4 Public and Interagency Participation in Antidegradation Reviews

Public participation is a component of the antidegradation review process. Public notice of antidegradation review findings, solicitations of public comment and maintenance of antidegradation review documents as part of the public record help ensure that interested parties can be engaged and involved throughout the review process. In addition, intergovernmental coordination and review is required prior to any action that allows degradation of water quality in a surface water afforded Tier 2 and Tier 2 ½ protection.

This section outlines the public participation and the intergovernmental coordination and review requirements for applicants.

4.1 Public Notification Requirements

The applicant will provide public notice and opportunity for public comment on the alternatives analysis and the social and economic importance review.

Before the alternatives analysis is finalized, a public notice must be issued by the applicant. The public notice will include a notice of availability of:

- determination of projected impacts on existing water quality;
- findings and determinations from the alternatives analysis;
- the conclusions of any social and economic evaluation of the proposed activity, where necessary;
- a description of the surface water that is subject to the antidegradation review;
- the time frame for submitting comments; and
- the methods by which comments may be submitted and to whom comments must be directed.

The public notice must be circulated by the applicant within the geographical area of the proposed activity by posting the notice in the post office and other public places for at least 30 days and by publishing the notice at least one time in local newspapers and periodicals, or, if appropriate, in a newspaper of general circulation for the county where the activity will occur. The notice will identify the action being considered, list all beneficial uses identified for the surface water and call for comments from the public regarding the proposed activity. The applicant shall submit to the department a summary of public comments received and the applicant’s responses at the time the applicant requests authorization for the activity under review.

A copy of the public notice outlined in Section 4.1 shall be sent to interested and potentially interested persons and other government agencies, including:

- EPA Region VII;
- U.S. Fish & Wildlife Service;
- the regional Iowa DNR Field Office;
- any applicable industrial contributor to the publicly owned treatment works;
- the county department of environmental health or comparable department in the county to which the facility discharges;
- any other state whose waters may be affected by the issuance of the permit; and
• any interested person or organization upon request.

4.2 Intergovernmental Coordination and Review

In conjunction with the public comment period, intergovernmental coordination is required by the applicant prior to approving a regulated activity that would degrade a surface water of the state. This requirement seeks to ensure that all relevant public entities at the local, state and federal levels are aware of any proposal to degrade water quality and are provided with an opportunity to review, seek additional information and comment on the proposal. The intergovernmental coordination and review process occurs prior to finalizing the alternatives analysis and social and economic importance review and may occur in tandem with public notice procedures outlined in the previous section. The time period for government agencies to submit comments will be the same as for public comments specified in section 4.1.
5 Antidegradation Review Decisions

Once the intergovernmental coordination and public notice requirements outlined above are satisfied, the applicant shall submit the alternatives analysis, the social and economic importance review, and the results of the public comment and intergovernmental review process to the department.

Regulated activities that may result in degradation of waters can only be approved after the department makes all of the following findings:

- The level of water quality necessary to protect applicable beneficial uses is fully maintained. Water quality shall not be degraded to a level that does not comply with the applicable Water Quality Standards (WQS).
- The highest statutory and regulatory requirements for new and existing point sources are achieved.
- All cost-effective and reasonable BMPs for nonpoint source pollution control are implemented (see Section 8).
- Allowing degradation of water quality is necessary and accommodates important economic or social development in the area where the surface water is located.

The department shall then make a final determination concerning the proposed activity. If the antidegradation review is accepted, implementation of the preferred alternative will be required in the permit. When information submitted to the department is not sufficient to approve the proposed activity, the department may request additional information.

All determinations, including determinations to deny the activity shall be documented by the department and made part of the Administrative Record of Decision. Review documents, including existing water quality assessments, determination of degradation, analysis of public comments, alternatives analyses, demonstration of social and economic importance and any other decisions or findings, will be made available to the public.

The applicant may appeal the department’s final decision pursuant to IAC Chapter 561-7, as adopted by reference at 567 IAC 7.1.

To the extent Iowa's statutes allow, any information submitted pursuant to the “Iowa Antidegradation Implementation Procedure” or other rules of the Environmental Protection Commission that contains confidential business information shall be kept confidential by the commission and employees and agents of the department if a timely request for confidentiality is made pursuant to IAC Chapter 561-2, as adopted by reference at 567 IAC 2.1, by the person submitting the information and such request is approved by the Department.
6 Permit Considerations

Permit requirements can have a significant impact on the treatment processes, it is important that the department be notified early as to the nature of the proposed activity, the discharge location and effluent characteristics. Developing permit effluent limits requires collection of a considerable amount of information on the receiving water, the applicant’s proposed activity and other activities in the drainage area. Early notification will ensure that the information collection process begins well before the applicant needs a permit to conduct planning activities, design facilities or proceed with project construction. In cases where the applicant intends to collect data on existing water quality in preparation for an antidegradation review, the department recommends that the applicant meet with the department in a pre-application conference prior to the expected date of application submittal.

Early notification and consultation between the applicant and the department will help ensure that the permitting process proceeds efficiently. Regulated activities that may temporarily degrade waters protected at the Tier 2 ½ & 3 level must comply with the antidegradation requirements applicable to that review level (i.e., provide proof that the degradation is only temporary and limited) before a permit will be granted. Any regulated activity that may temporarily degrade an Outstanding National Resource Water or Outstanding State Resource Water will require an individual NPDES permit or individual §401 certification to ensure that impacts will be temporary and limited and that the public can participate in the decision.

6.1 General Permits

A number of discharges to surface waters are authorized under general NPDES permits issued by the department. These include storm water runoff from municipalities and industries, mining and processing facilities, private on-site wastewater treatment systems and construction sites one acre or larger.

Except as described below, regulated activities authorized by general permits are not required to undergo a Tier 2 antidegradation review as part of the Notice of Intent process. However, new and reissued general permits must be evaluated to consider the potential for degradation as a result of the permitted discharges.

All NPDES general permits require that permit conditions be met, including the general requirement that permitted discharges must ensure that water quality standards are not violated and best management practices contained in the permit are implemented. Compliance with the terms of the general permits issued by the department is required to maintain authorization to discharge under the general permit. Discharges covered by a general permit that cannot comply with general permit conditions or antidegradation requirements will be required to seek coverage under an individual permit. The following sections describe the general antidegradation implementation provisions for various types of activities covered by general permits.

Overview of the Antidegradation Review Procedure for General Permits

Antidegradation reviews for discharges authorized by general permits will occur for the entire class of general permittees when the general permit is issued by the department. Antidegradation reviews will focus on pollutants of concern that may contribute to water quality degradation.

Individual activities authorized by general NPDES permits may be subject to a full antidegradation review through the individual permit process if the Director determines that the
cumulative degradation resulting from multiple discharges to a water body, degradation from a single discharge over time, or other individual circumstances warrant a full antidegradation review at the time the Notice of Intent is submitted.

Information regarding the existence, effectiveness, or costs of control practices for controlling flows, reducing pollution, and meeting the water quality and antidegradation requirements for activities authorized by some general permits (e.g., storm water from construction activity) is still emerging. For permittees covered under general permits #1 through #5, the antidegradation requirements of this section can be considered met where there is a permit requirement to select, develop, adopt, and refine control practices (i.e., design, installation, and maintenance) for protecting water quality. This adaptive management process must ensure that information is developed and used to revise permit or program requirements.

6.2 Individual Permits

Following the effective date of this document, all applications for new or expanded regulated activities shall undergo an antidegradation review if degradation is likely in the receiving water or downstream waters. In these cases, site-specific permit requirements will be based upon applicable effluent guidelines, water quality standards, the characteristics of the discharge and the alternatives analysis. In addition, the permit must ensure that beneficial uses are maintained and protected in the receiving waters and downstream waters.

Applicants for an individual permit may be required to provide or collect existing water quality information on any pollutants of concern reasonably expected to be in the discharge, if that information is not already available. Data collection requirements may depend on the nature of the proposed discharge and the pollutants reasonably expected in the discharge.

6.3 §401 Certifications

Section 404 of the Clean Water Act regulates the placement of dredged or fill material into the “waters of the United States,” including small streams and wetlands adjacent or connected to “waters of the United States.” The U.S. Army Corps of Engineers (Corps) administers the §404 permit program dealing with these activities (e.g., wetland fills, in-stream sand/gravel work, etc.) in cooperation with the EPA and in consultation with other public agencies.

In order to ensure that antidegradation and other water quality protection requirements are considered, reviewed and met in a comprehensive and efficient manner, these requirements will be addressed and implemented through the §404 permitting and §401 water quality certification processes. Under this approach, applicants who fulfill the terms and conditions of applicable §404 permits and the terms and conditions of the corresponding §401 water quality certification will have fulfilled the antidegradation requirements. Additional antidegradation considerations may be incorporated into §404 permits and the corresponding §401 certifications at the time of permit issuance. The department shall not issue a §401 certification where degradation resulting from the project is not necessary to accommodate important social or economic development.

For minor activities covered under §404 general permits (e.g., road culvert installation, utility line activities, bank stabilization, etc.), antidegradation requirements will be considered to be met if all appropriate and reasonable BMPs related to erosion and sediment control, project stabilization and prevention of water quality degradation (e.g., preserving vegetation, stream bank stability and basic drainage) are applied and maintained. Applicants desiring to fulfill antidegradation review
requirements under this approach will be responsible for ensuring that permit requirements and relevant water quality certification conditions are met.

Iowa manages its §401 water quality certification program to ensure that the placement of dredged or fill material into surface waters do not create any unmitigated water quality impairments or degradation of surface waters. Under the BMP-based approach adopted by Iowa, regulated activities for which mitigation has been certified by the state pursuant to §401 of the Clean Water Act will not be required to undergo a separate Tier 2 review in accordance with this document.

Activities specifically described in Section 404(f) of the Clean Water Act will be considered to be in compliance with antidegradation requirements if conducted in conformance with guidelines defining and interpreting such activities as adopted and implemented by the Environmental Protection Agency and the United States Army Corps of Engineers.

6.4 Activities Covered by NPDES Storm Water Permits

Urban areas with populations greater than 100,000 based on the 1990 census (Phase I MS4 communities) were required to obtain an individual NPDES permit. Many urban areas with populations less than 100,000 determined from 2000 census data are considered Phase II MS4 communities. Storm water discharges from Phase II MS4s are authorized by individual storm water permits. Phase I or Phase II MS4s authorized under individual storm water permits are required to meet antidegradation requirements.

However, antidegradation reviews for individual NPDES storm water permits will be based on an adaptive management approach. This approach may include routine monitoring of storm water quality at representative outfalls to adequately characterize storm water discharges. The MS4 will then evaluate, through effectiveness monitoring, whether storm water quality is being maintained, improving, or degrading and whether BMPs identified in the MS4’s storm water pollution prevention plan are effective at controlling the discharge of pollutants. Antidegradation reviews of individual NPDES storm water permits will consist of an analysis of the effectiveness of the BMPs and compliance with the requirements of the storm water permit. The department shall not issue an individual NPDES storm water permit where the degradation resulting from the project is not necessary to accommodate important social or economic development.

6.5 CAFO Considerations

A Concentrated Animal Feeding Operations (CAFO) must comply with the antidegradation policy when applying for or renewing a NPDES permit. However, the antidegradation requirements only apply to permits for new or expanded discharges. Discharges from confinement feeding operations are prohibited, so the antidegradation policies only apply to CWA regulated open lot CAFOs.

An expanded discharge from a CAFO includes adding more animals or increasing the size of the feeding areas or the areas that contain manure. Adding pollution controls to an existing CAFO is not degradation if the operation is not expanded at the same time. Permitting an existing CAFO that never had a NPDES permit is not degradation if the permit application does not include an expansion of the operation (see Section 2.2).

Tier 2 Analysis
When requesting a new or expanded discharge from a CAFO, an applicant must submit an antidegradation analysis similar to the process described in Chapter 3. An analysis of less degrading alternatives is not required, however, because CAFO NPDES permits are required by Chapter 567 IAC 65 to implement controls on their discharge. The control requirements in Chapter 567 IAC 65 are identical to the controls required in 40 CFR 401.31 which are listed as the “best practical control technology currently available”.

Social and Economic Importance
Applicants must submit information listed in Section 3.3 in order to demonstrate that the degradation will accommodate important economic and social development.

Public Notice
A separate notice period for public comment for the antidegradation review is not necessary. It can be combined with the notice period for public comment for the nutrient management plan required by Subrule 567 IAC 65.112(7). A combined notice period for public comment for the antidegradation review and nutrient management plan must meet the requirements listed below.

The owner of the open feedlot operation shall publish a notice for public comment in a newspaper having a general circulation in the county where the open feedlot operation is or is proposed to be located and in the county where manure, process wastewater, or open feedlot effluent which originates from the open feedlot operation may be applied under the terms and conditions of the nutrient management plan.

The notice for public comment shall include all of the following:
(1) The name of the owner of the open feedlot operation submitting the nutrient management plan.
(2) The name of the township where the open feedlot operation is or is proposed to be located and the name of the township where manure, process wastewater, or open feedlot effluent originating from the open feedlot operation may be applied.
(3) The animal unit capacity of the open feedlot operation.
(4) The time when and the place where the nutrient management plan may be examined as provided in Iowa Code section 22.2.
(5) Procedures for providing public comment to the department. The notice shall also include procedures for requesting a public hearing conducted by the department. The department is not required to conduct a public hearing if it does not receive a request for the public hearing within ten days after the first publication of the notice for public comment. If such a request is received, the public hearing must be conducted within 30 days after the first date that the notice for public comment was published.
(6) A statement that a person may acquire information relevant to making comments under this subrule by accessing the department’s Internet Web site. The notice for public comment shall include the address of the department’s Internet Web site as required by the department.
(7) The conclusions of any social and economic evaluation of the proposed activity.
(8) A description of the surface water that is subject to the antidegradation review and list all beneficial uses identified for the surface water.

The discussion of the social and economic importance of the project and proof of public notice for the antidegradation analysis—either combined with the NMP notice or separate—must be submitted with the NPDES permit application.

Standard text for a notice period for public comment for CAFOs is available from the department.

**Intergovernmental Coordination and Review**
For CAFOs, the intergovernmental coordination requirements discussed in Chapter 4 will be completed by the department in the process of renewing or issuing the NPDES permit.
7 Monitoring, Assessment, & TMDL Considerations

Applicability to §305(b) Report and §303(d) List

Section 305(b) of the Clean Water Act requires each state to prepare and submit to EPA a biennial report describing water quality of all surface waters in the state. Each state must monitor water quality and review available data to determine the degree to which Water Quality Standards are being met. From this review, waters that do not fully meet WQS are identified. These waters are known as impaired waters. Those impaired waters that are impaired by a discrete pollutant or chemical condition, do not yet have sufficient water quality protection measures in place, and do not yet have an approved TMDL are placed on the state’s §303(d) list. Identification of a surface water as impaired may be based on violations of numeric or narrative WQS.

To coordinate antidegradation reviews with the §305(b) and §303(d) listing process, the department will implement the following procedures:

Tier 1 Protection (applicable to all waters):

No further degradation of existing water quality for a pollutant of concern is allowed in a surface water where the existing water quality for the pollutant of concern does not meet the applicable WQS. Waters assessed as not meeting applicable WQS are candidates for addition to Iowa’s §303(d) List and for TMDL development.

Tier 2 Protection:

If performed properly, Tier 2 reviews will not result in degradation sufficient to cause designated use impairment. If a §305(b) water quality assessment shows that significant degradation of a surface water is occurring such that impairment and addition to the state’s §303(d) List is likely in the near future (within a two to three-year period) the department may conduct a special study of the extent and source(s) of degradation to determine the cause for the adverse trend and identify appropriate antidegradation actions to reverse any preventable trends.

The plan may include providing technical and other assistance to address probable sources of degradation and implement appropriate management practices. Other possible options include awarding priority points for grant or other funding programs targeted at water quality protection, amending permits or water quality certification conditions and working with stakeholders to support actions needed to protect and restore water quality.

Tier 2 ½ & 3 Protection:

No degradation, except for temporary degradation or from the expansion of existing sources, is allowed in the unique waters afforded Tier 2 ½* & 3 protection. If a §305(b) assessment shows that long-term degradation (i.e., not temporary degradation) of an Outstanding National Resource Water or Outstanding Iowa Water is occurring, the department may conduct a special study of the extent and source(s) of degradation to determine likely trends and explore possible antidegradation actions needed to reverse the trend, similar to what was described for ensuring Tier 2 protection. Such a study is justified even though the water may continue to fully meet state WQS and is not a likely candidate for addition to the state’s §303(d) list.

*Tier 2 ½ does allow degradation in limited instances as identified in Section 1.2 and 2.4.
8 Implementation of Controls for Nonpoint Pollution Sources

Antidegradation review applies only to activities that require a permit or a water quality certification pursuant to federal law (CWA § 402 NPDES permits, CWA § 404 dredge and fill permits, and any activity requiring a CWA § 401 certification). Nonpoint discharges do not currently require a permit pursuant to these federal provision or Iowa law. States may adopt regulatory programs to address nonpoint sources of pollution. Unless Iowa imposes a regulatory framework upon nonpoint sources of water pollution there is no mechanism available for the imposition of antidegradation review in regard to these discharges and such review can not occur.

When applying Tier 2 review to a proposed regulated activity the department shall assure the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control before allowing any lowering of water quality. To the extent that existing programs establish best management practice requirements for entities contributing to nonpoint pollution those requirements establish the maximum regulatory requirements that can be required pursuant to rule 61.2“b” and 40 CFR 131.12(a)(2). In many cases the Department lacks the authority to require entities that contribute to nonpoint pollution to implement all cost-effective and reasonable best management practices. In either situation, additional best management practices or regulatory requirements must be imposed through modification of statutes or rules outside of the antidegradation review
Appendix A – Antidegradation Review Flow Chart

Alternatives Analysis

Identify Non-Degrading and Less Degrading Pollution Control Measures → Select 3-5 Alternatives to Review

Is the alternative technically possible?
1. Effectiveness and Reliability
2. Potential Environmental Impacts

How much do the practicable alternatives cost?
1. Capital Costs, O&M Costs
2. Water Quality Benefits

Are any non-degrading alternatives affordable?
Use “Interim Economic Guidance for Water Quality Standards”

Determine the “Preferred Alternative”

If the Preferred Alternative results in degradation, then determine if the preferred alternative will allow important economic and social development.

Identify the affected community → Characterize the social and economic conditions

Describe the important social and economic development associated with the project

Describe the expected changes in the social and economic conditions

Public Comment Process

Submit Alternatives Analysis to IDNR for review and approval
# Appendix B – Outstanding Iowa Waters

<table>
<thead>
<tr>
<th>STREAMS</th>
<th>DESCRIPTION</th>
<th>Length (Miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baron Springs</td>
<td>Mouth (S2, T91N, R6W, Clayton Co.) to spring source (S4, T91N, R6W, Clayton Co.)</td>
<td>1.99</td>
</tr>
<tr>
<td>Bear Creek</td>
<td>From road crossing in SW ¼, NW1/4, S11, T86N, R10W, Benton Co. to E line.S25, T87N, R10W, Buchanan Co.</td>
<td>5.2</td>
</tr>
<tr>
<td>Bloody Run</td>
<td>From (W. line of Section 22, T95N, R4W, Clayton Co.) to the confluence with Unnamed Creek (NAD83 UTM Coordinates X(Easting) 4766657.44 Y(Northing) 8.59</td>
<td>8.59</td>
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<tr>
<td>Brownfield Creek</td>
<td>Mouth (Clayton Co.) to spring source (S31, T91N, R3W, Clayton Co.)</td>
<td>.94</td>
</tr>
<tr>
<td>Clear Creek</td>
<td>Mouth (Allamakee Co.) to W. line of Section 25, T99N, R4W, Allamakee Co.</td>
<td>3.79</td>
</tr>
<tr>
<td>Deer Creek</td>
<td>Road crossing in SE9, S35, T100N, R19W, Worth Co. to the N. line of S7, T100N, R19W, Worth Co.</td>
<td>7.29</td>
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<tr>
<td>Dousman Creek</td>
<td>Mouth (S33, T96N, R3W, Allamakee Co.) to Allamakee-Clayton Co. line</td>
<td>3.44</td>
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<tr>
<td>Duck Creek</td>
<td>From the mouth (S14, T100N, R06W Allamakee Co.) to the Iowa-Minnesota state line.</td>
<td>1.98</td>
</tr>
<tr>
<td>Ensign Creek (aka Ensign Hollow)</td>
<td>Mouth (S28, T92N, R6W, Clayton Co.) to spring source (S29, T92N, R6W, Clayton Co.)</td>
<td>1.05</td>
</tr>
<tr>
<td>Unnamed Creek (a.k.a. Erickson Spring Branch)</td>
<td>Mouth (S23, T98N, R4W, Allamakee Co.) to W. line of S23, T98N, R4W, Allamakee Co.</td>
<td>.91</td>
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<tr>
<td>French Creek</td>
<td>Mouth (Allamakee Co.) to E. line of Section 23, T99N, R5W, Allamakee Co.</td>
<td>5.58</td>
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<tr>
<td>Grannis Creek</td>
<td>Mouth (S30, T95N, R7W, Fayette Co.) to W. line of S36, T93N, R8W, Fayette Co.</td>
<td>3.56</td>
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<tr>
<td>Jones Creek</td>
<td>From the mouth (S19, T98N, R04W Allamakee Co.) to bridge crossing at Clonkitty Rd. (S14, T98N, R05W Allamakee Co.)</td>
<td>5.75</td>
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<tr>
<td>Kleinein Creek</td>
<td>Mouth (Clayton Co.) to spring source (South Spring) (S10, T91N, R6W, Clayton Co.)</td>
<td>3.96</td>
</tr>
<tr>
<td>Lime Creek</td>
<td>From confluence with unnamed tributary in NE ¼, NW ¼, S34, T87N, R10W, Buchanan Co. to N. line of S23, T87N, R10W, Buchanan Co.</td>
<td>3.0</td>
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<td>Little Paint Creek</td>
<td>Mouth to N. line of Section 30, T97N, R3W</td>
<td>1.92</td>
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<tr>
<td>Ludlow Creek</td>
<td>Mouth (S2, T96N, R6W, Allamakee Co.) to confluence with an unnamed tributary (S33, T97N, R6W, Allamakee Co.)</td>
<td>2.00</td>
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<tr>
<td>Mill Creek (aka Big Mill Creek)</td>
<td>Confluence with Little Mill Cr. to confluence with Unnamed Cr. (S1, T86N, R3E, Jackson Co.)</td>
<td>8.04</td>
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<tr>
<td>Mossey Glen Creek</td>
<td>Mouth (S3, T91N, R5W, Clayton Co.) to S. line of S10, T91N, R5W, Clayton Co.</td>
<td>1.96</td>
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<tr>
<td>North Bear Creek</td>
<td>Mouth (S25, T100N, R7W, Winneshiek Co.) to Iowa-Minnesota state line</td>
<td>6.39</td>
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<tr>
<td>Pine Creek (aka South Pine Creek)</td>
<td>Mouth (S26, T99N, R7W, Winneshiek Co.) to N. line of S21, T99N, R7W, Winneshiek Co.</td>
<td>2.80</td>
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<tr>
<td>Smith Creek (aka Trout River)</td>
<td>Mouth (S21, T98N, R7W, Winneshiek Co.) to S. line of S33, T98N, R7W, Winneshiek Co.</td>
<td>3.42</td>
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<tr>
<td>South Canoe Creek</td>
<td>From the mouth (S22, T99N, R08W Winneshiek Co.) to the bridge crossing at Winn Rd. (S21, T99N, R08W Win neshiek Co.)</td>
<td>1.90</td>
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<tr>
<td>Spring Branch Creek</td>
<td>Mouth (S10, T88N, R5W, Delaware Co.) to spring source (S35, T89N, R5W, Delaware Co.)</td>
<td>2.83</td>
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<td>Storybook Hollow</td>
<td>Mouth (S7, T86N, R4E, Jackson Co.) to S. line of S12, T86N, R3E, Jackson Co.</td>
<td>1.37</td>
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<tr>
<td>Trout Run</td>
<td>Mouth (S16, T98N, R4W, Allamakee Co.) through one mile reach</td>
<td>1.0</td>
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<tr>
<td>Twin Springs Creek</td>
<td>Mouth (S17, T98N, R8W, Winneshiek Co.) to springs in Twin Springs Park (S20, T98N, R8W, Winneshiek Co.)</td>
<td>0.61</td>
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<tr>
<td>Unnamed Creek (aka Cold Water Cr.)</td>
<td>Mouth (S32, T100N, R9W, Winneshiek Co.) to N. line of Section 31, T100N, R9W, Winneshiek Co.</td>
<td>2.46</td>
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<tr>
<td>Unnamed Creek (aka S. Fk. Big Mill)</td>
<td>Mouth (S8, T86N, R4E, Jackson Co.) to W. line of S17, T86N, R4E, Jackson Co.</td>
<td>0.97</td>
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<td>Village Creek</td>
<td>Mouth (Allamakee Co.) to W. line of S19, T98N, R4W, Allamakee Co.</td>
<td>13.32</td>
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<tr>
<td>Waterloo Creek</td>
<td>Mouth (S35, T100N, R6W, Allamakee Co.) to Iowa-Minnesota state line</td>
<td>9.39</td>
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<tr>
<td>West Branch French Creek</td>
<td>From the mouth (S23, T99N, R05W, Allamakee Co.) to the confluence with Unnamed Creek (S26, T99N, R05W, Allamakee Co.)</td>
<td>.67</td>
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**Grand Total**: 118.08
<table>
<thead>
<tr>
<th>LAKES</th>
<th>Description (Section, Township, Range)</th>
<th>Size (Acres)</th>
</tr>
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<tr>
<td>Big Spirit Lake SGMA</td>
<td>S33, T100N, R36W</td>
<td>5684</td>
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<tr>
<td>West Okoboji Lake SGMA</td>
<td>S20, T99N, R36W</td>
<td>3,847</td>
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## Appendix C – Outstanding National Resource Waters

<table>
<thead>
<tr>
<th>Outstanding National Resource Waters</th>
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<td></td>
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</tbody>
</table>
Revisions to Chapter 61- Iowa Water Quality Standards

Provisions not effective for Clean Water Act purposes:

- Designated use changes for water bodies in which data did not support removing a primary contact recreational use (Tables 3 and 5).
- Designated use changes for water bodies in which public comments indicate that a higher recreational use is an attainable use (Table 4).
- Designated use changes for water bodies in which no assessment was performed within the stream segment (Table 5).
- Designated use changes for water bodies that rely on data collected outside the recreational season (Table 5).
- Designated use changes for water bodies in which the data contained errors (Table 5).
- Designated use changes for water bodies in which the aquatic life use changes are not supported by data (Tables 5 and 6).

Items on which EPA is reserving action:

- Waters that have not been designated with a recreational use (Table 7).
- Recommendations to remove a primary contact recreational use rely on data collected during possible drought conditions (Table 5).
CHAPTER 61
WATER QUALITY STANDARDS
[ Prior to 7/1/83, DEQ Ch 16]
[ Prior to 12/3/86, Water, Air and Waste Management[900]]

WATER QUALITY STANDARDS

567—61.1 Rescinded, effective August 31, 1977.

567—61.2(455B) General considerations.

61.2(1) Policy statement. It shall be the policy of the commission to protect and enhance the quality of all the waters of the state. In the furtherance of this policy it will attempt to prevent and abate the pollution of all waters to the fullest extent possible consistent with statutory and technological limitations. This policy shall apply to all point and nonpoint sources of pollution.

These water quality standards establish selected criteria for certain present and future designated uses of the surface waters of the state. The standards establish the areas where these uses are to be protected and provide minimum criteria for waterways having nondesignated uses as well. Many surface waters are designated for more than one use. In these cases the more stringent criteria shall govern for each parameter.

Certain of the criteria are in narrative form without numeric limitations. In applying such narrative standards, decisions will be based on the U.S. Environmental Protection Agency’s methodology described in “Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses,” (1985) and on the rationale contained in “Quality Criteria for Water,” published by the U.S. Environmental Protection Agency (1977), as updated by supplemental Section 304 (of the Act) Ambient Water Quality Criteria documents. To provide human health criteria for parameters not having numerical values listed in 61.3(3) Table 1, the required criteria will be based on the rationale contained in these EPA criteria documents. The human health criterion considered will be the value associated with the consumption of fish flesh and a risk factor of $10^{-5}$ for carcinogenic parameters. For noncarcinogenic parameters, the recommended EPA criterion will be selected. For Class C water, the EPA criteria for fish and water consumption will be selected using the same considerations for carcinogenic and noncarcinogenic parameters as noted above.

All methods of sample collection, preservation, and analysis used in applying any of the rules in these standards shall be in accord with those prescribed in 567—Chapter 63.

61.2(2) Antidegradation policy. It is the policy of the state of Iowa that:

a. Tier 1 protection. Existing surface water uses and the level of water quality necessary to protect the existing uses will be maintained and protected.

b. Tier 2 protection. Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the department finds, after full satisfaction of the intergovernmental coordination and public participation provisions, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the department shall ensure water quality adequate to protect existing uses fully. Further, the department shall ensure the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control before allowing any lowering of water quality.

c. Tier 2½ protection—outstanding Iowa waters. Where high quality waters constitute an outstanding state resource, such as waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

d. Tier 3 protection—outstanding national resource waters. Where high quality waters constitute an outstanding national resource, such as waters of national and state parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. Any proposed activity that would result in a permanent new or expanded source of pollutants in an outstanding national resource water is prohibited.
e. The four levels of protection provided by the antidegradation policy in paragraphs “a” through “d” of this subrule shall be implemented according to procedures hereby incorporated by reference and known as the “Iowa Antidegradation Implementation Procedure,” effective February 17, 2010. This document may be obtained on the department’s Web site at http://www.iowadnr.com/water/standards/index.html.

f. All unapproved facility plans for new or expanded construction permits, except for construction permits issued for nondischarging facilities, shall undergo an antidegradation review if degradation is likely in the receiving water or downstream waters following February 17, 2010.

g. This policy shall be applied in conjunction with water quality certification review pursuant to Section 401 of the Act. In the event that activities are specifically exempted from flood plain development permits or any other permits issued by this department in 567—Chapters 70, 71, and 72, the activity will be considered consistent with this policy. Other activities not otherwise exempted will be subject to 567—Chapters 70, 71, and 72 and this policy. United States Army Corps of Engineers (Corps) nationwide permits 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, and 50 as well as Corps regional permits 7, 27, 33, and 34 as promulgated February 16, 2011, are certified pursuant to Section 401 of the Clean Water Act subject to the following Corps regional conditions and the state water quality conditions:

1. Side slopes of a newly constructed channel will be no steeper than 2:1 and planted to permanent, perennial, native vegetation if not armored.

2. Nationwide permits with mitigation may require recording of the nationwide permit and pertinent drawings with the registrar of deeds or other appropriate official charged with the responsibility for maintaining records of title to, or interest in, real property and may also require the permittee to provide proof of that recording to the Corps.

3. Mitigation shall be scheduled prior to, or concurrent with, the discharge of dredged or fill material into waters of the United States.

4. For discharges of dredged or fill material resulting in the permanent loss of more than 1/10 acre of waters of the United States (including jurisdictional wetlands), a compensatory mitigation plan to offset those losses will be required. In addition, a preconstruction notice to the Corps of Engineers in accordance with general condition 27 will be required.

5. For newly constructed channels through areas that are unvegetated, native grass filter strips, or a riparian buffer with native trees or shrubs a minimum of 35 feet wide from the top of the bank must be planted along both sides of the new channel. A survival rate of 80 percent of desirable species shall be achieved within three years of establishment of the buffer strip.

6. For single-family residences authorized under nationwide permit 29, the permanent loss of waters of the United States (including jurisdictional wetlands) must not exceed 1/4 acre.

7. For nationwide permit 46, the discharge of dredged or fill material into ditches that would sever the jurisdiction of an upstream water of the United States from a downstream water of the United States is not allowed.

8. For projects that impact an outstanding national resource water, outstanding Iowa water, fens, bogs, seeps, or sedge meadows, an individual Section 401 Water Quality Certification will be required (Iowa Section 401 Water Quality Certification condition).

9. For nationwide permits when the Corps’ district engineer has issued a waiver to allow the permittee to exceed the limits of the nationwide permit, an individual Section 401 Water Quality Certification will be required (Iowa Section 401 Water Quality Certification condition). Written verification by the Corps or 401 certification by the state is required for activities covered by these permits as required by the nationwide permit or the Corps, and the activities are allowed subject to the terms and conditions of the nationwide and regional permits. The department will maintain and periodically update a guidance document listing special waters of concern. This document will be provided to the Corps for use in determining whether preconstruction notices should be provided to the department and other interested parties prior to taking action on applications for projects that would normally be covered by a nationwide or regional permit and not require preconstruction notice under nationwide permit conditions.
61.2(3) Minimum treatment required. All wastes discharged to the waters of the state must be of such quality that the discharge will not cause the narrative or numeric criteria limitations to be exceeded. Where the receiving waters provide sufficient assimilative capacity that the water quality standards are not the limiting factor, all point source wastes shall receive treatment in compliance with minimum effluent standards as adopted in rules by the department.

There are numerous parameters of water quality associated with nonpoint source runoff which are of significance to the designated water uses specified in the general and specific designations in 61.3(455B), but which are not delineated. It shall be the intent of these standards that the limits on such nonpoint source related parameters when adopted shall be those that can be achieved by best management practices as defined in the course of the continuing planning process from time to time. Existing water quality and nonpoint source runoff control technology will be evaluated in the course of the Iowa continuing planning process, and best management practices and limitations on specific water quality parameters will be reviewed and revised from time to time to ensure that the designated water uses and water quality enhancement goals are met.

61.2(4) Regulatory mixing zones. Mixing zones are recognized as being necessary for the initial assimilation of point source discharges which have received the required degree of treatment or control. Mixing zones shall not be used for, or considered as, a substitute for minimum treatment technology required by subrule 61.2(3). The objective of establishing mixing zones is to provide a means of control over the placement and emission of point source discharges so as to minimize environmental impacts. Waters within a mixing zone shall meet the general water quality criteria of subrule 61.3(2). Waters at and beyond mixing zone boundaries shall meet all applicable standards and the chronic and human health criteria of subrule 61.3(3), Tables 1 and 3, for that particular water body or segment. A zone of initial dilution may be established within the mixing zone beyond which the applicable standards and the acute criteria of subrule 61.3(3) will be met. For waters designated under subrule 61.3(5), any parameter not included in Tables 1, 2 and 3 of subrule 61.3(3), the chronic and human health criteria, and the acute criterion calculated following subrule 61.2(1), will be met at the mixing zone and zone of initial dilution boundaries, respectively.

a. Due to extreme variations in wastewater and receiving water characteristics, spatial dimensions of mixing zones shall be defined on a site-specific basis. These rules are not intended to define each individual mixing zone, but will set maximum limits which will satisfy most biological, chemical, physical and radiological considerations in defining a particular mixing zone. Additional details are noted in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009, for considering unusual site-specific features such as side channels and sand bars which may influence a mixing zone. Applications for operation permits under 567—subrule 64.3(1) may be required to provide specific information related to the mixing zone characteristics below their outfall so that mixing zone boundaries can be determined.

b. For parameters included in Table 1 only (which does not include ammonia nitrogen), the dimensions of the mixing zone and the zone of initial dilution will be calculated using a mathematical model presented in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009, or from instream studies of the mixing characteristics during low flow. In addition, the most restrictive of the following factors will be met:

(1) The stream flow in the mixing zone may not exceed the most restrictive of the following:
   1. Twenty-five percent of the design low stream flows noted in subrule 61.2(5) for interior streams and rivers, and the Big Sioux and Des Moines Rivers.
   2. Ten percent of the design low stream flows noted in subrule 61.2(5) for the Mississippi and Missouri Rivers.
   3. The stream flow contained in the mixing zone at the most restrictive of the applicable mixing zone length criteria, noted below.

(2) The length of the mixing zone below the point of discharge shall be set by the most restrictive of the following:
   1. The distance to the juncture of two perennial streams.
   2. The distance to a public water supply intake.
3. The distance to the upstream limits of an established recreational area, such as public beaches, and state, county and local parks.

4. The distance to the middle of a crossover point in a stream where the main current flows from one bank across to the opposite bank.

5. The distance to another mixing zone.

6. Not to exceed a distance of 2000 feet.

7. The location where the mixing zone contained the percentages of stream flow noted in 61.2(4) “b” (1).

(3) The width of the mixing zone is calculated as the portion of the stream containing the allowed mixing zone stream flow. The mixing zone width will be measured perpendicular to the basic direction of stream flow at the downstream boundary of the mixing zone. This measurement will only consider the distance of continuous water surface.

(4) The width and length of the zone of initial dilution may not exceed 10 percent of the width and length of the mixing zone.

c. The stream flow used in determining wasteload allocations to ensure compliance with the maximum contaminant level (MCL), chronic and human health criteria of Table 1 will be that value contained at the boundary of the allowed mixing zone. This stream flow may not exceed the following percentages of the design low stream flow as measured at the point of discharge:

   (1) Twenty-five percent for interior streams and rivers, and the Big Sioux and Des Moines Rivers.

   (2) Ten percent for the Mississippi and Missouri Rivers.

   The stream flow in the zone of initial dilution used in determining effluent limits to ensure compliance with the acute criteria of Table 1 may not exceed 10 percent of the calculated flow associated with the mixing zone.

d. For toxic parameters noted in Table 1, the following exceptions apply to the mixing zone requirements:

   (1) No mixing zone or zone of initial dilution will be allowed for waters designated as lakes or wetlands.

   (2) No zone of initial dilution will be allowed in waters designated as cold water.

   (3) The use of a diffuser device to promote rapid mixing of an effluent in a receiving stream will be considered on a case-by-case basis with its usage as a means for dischargers to comply with an acute numerical criterion.

   (4) A discharger to interior streams and rivers, the Big Sioux and Des Moines Rivers, and the Mississippi or Missouri Rivers may provide to the department, for consideration, instream data which technically supports the allowance of an increased percentage of the stream flow contained in the mixing zone due to rapid and complete mixing. Any allowed increase in mixing zone flow would still be governed by the mixing zone length restrictions. The submission of data should follow the guidance provided in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009.

e. For ammonia criteria noted in Table 3, the dimensions of the mixing zone and the zone of initial dilution will be calculated using a mathematical model presented in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009, or from instream studies of the mixing characteristics during low flow. In addition, the most restrictive of the following factors will be met:

   (1) The stream flow in the mixing zone may not exceed the most restrictive of the following:

      1. One hundred percent of the design low stream flows noted in subrule 61.2(5) for locations where the dilution ratio is less than or equal to 2:1.

      2. Fifty percent of the design low stream flows noted in subrule 61.2(5) for locations where the dilution ratio is greater than 2:1, but less than or equal to 5:1.

      3. Twenty-five percent of the design low stream flows noted in subrule 61.2(5) for locations where the dilution ratio is greater than 5:1.

      4. The stream flow contained in the mixing zone at the most restrictive of the applicable mixing zone length criteria, noted below.
(2) The length of the mixing zone below the point of discharge shall be set by the most restrictive of the following:
   1. The distance to the juncture of two perennial streams.
   2. The distance to a public water supply intake.
   3. The distance to the upstream limits of an established recreational area, such as public beaches, and state, county, and local parks.
   4. The distance to the middle of a crossover point in a stream where the main current flows from one bank across to the opposite bank.
   5. The distance to another mixing zone.
   6. Not to exceed a distance of 2000 feet.
   7. The location where the mixing zone contained the percentages of stream flow noted in 61.2(4)“e’”(1).

(3) The width of the mixing zone is calculated as the portion of the stream containing the allowed mixing zone stream flow. The mixing zone width will be measured perpendicular to the basic direction of stream flow at the downstream boundary of the mixing zone. This measurement will only consider the distance of continuous water surface.

(4) The width and length of the zone of initial dilution may not exceed 10 percent of the width and length of the mixing zone.

f. For ammonia criteria noted in Table 3, the stream flow used in determining wasteload allocations to ensure compliance with the chronic criteria of Table 3 will be that value contained at the boundary of the allowed mixing zone. This stream flow may not exceed the percentages of the design low stream flow noted in 61.2(4)“e’”(1) as measured at the point of discharge.

The pH and temperature values at the boundary of the mixing zone used to select the chronic ammonia criteria of Table 3 will be from one of the following sources. The source of the pH and temperature data will follow the sequence listed below, if applicable data exists from the source.

(1) Specific pH and temperature data provided by the applicant gathered at their mixing zone boundary. Procedures for obtaining this data are noted in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009.

(2) Regional background pH and temperature data provided by the applicant gathered along the receiving stream and representative of the background conditions at the outfall. Procedures for obtaining this data are noted in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009.

(3) The statewide average background values presented in Table IV-2 of the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009.

The stream flow in the zone of initial dilution used in determining effluent limits to ensure compliance with the acute criteria of Table 3 may not exceed 5 percent of the calculated flow associated with the mixing zone for facilities with a dilution ratio of less than or equal to 2:1, and not exceed 10 percent of the calculated flow associated with the mixing zone for facilities with a dilution ratio of greater than 2:1. The pH and temperature values at the boundary of the zone of initial dilution used to select the acute ammonia criteria of Table 3 will be from one of the following sources and follow the sequence listed below, if applicable data exists from the source.

1. Specific effluent pH and temperature data if the dilution ratio is less than or equal to 2:1.
2. If the dilution ratio is greater than 2:1, the logarithmic average pH of the effluent and the regional or statewide pH provided in 61.2(4)“f’” will be used. In addition, the flow proportioned average temperature of the effluent and the regional or statewide temperature provided in 61.2(4)“f’” will be used. The procedures for calculating these data are noted in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009.

g. For ammonia criteria noted in Table 3, the following exceptions apply to the mixing zone requirements.

(1) No mixing zone or zone of initial dilution will be allowed for waters designated as lakes or wetlands.
(2) No zone of initial dilution will be allowed in waters designated as cold water.
(3) The use of a diffuser device to promote rapid mixing of an effluent in a receiving stream will be considered on a case-by-case basis with its usage as a means for dischargers to comply with an acute numerical criterion.

(4) A discharger to interior streams and rivers, the Big Sioux and Des Moines Rivers, and the Mississippi and Missouri Rivers may provide to the department, for consideration, instream data which technically supports the allowance of an increased percentage of the stream flow contained in the mixing zone due to rapid and complete mixing. Any allowed increase in mixing zone flow would still be governed by the mixing zone length restrictions. The submission of data should follow the guidance provided in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009.

h. Temperature changes within mixing zones established for heat dissipation will not exceed the temperature criteria in 61.3(3)“b”(5).

i. The appropriateness of establishing a mixing zone where a substance discharged is bioaccumulative, persistent, carcinogenic, mutagenic, or teratogenic will be carefully evaluated. In such cases, effects such as potential groundwater contamination, sediment deposition, fish attraction, bioaccumulation in aquatic life, bioconcentration in the food chain, and known or predicted safe exposure levels shall be considered.

61.2(5) Implementation strategy. Numerical criteria specified in these water quality standards shall be met when the flow of the receiving stream equals or exceeds the design low flows noted below.

<table>
<thead>
<tr>
<th>Type of Numerical Criteria</th>
<th>Design Low Flow Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Life Protection (TOXICS)</td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>1Q10</td>
</tr>
<tr>
<td>Chronic</td>
<td>7Q10</td>
</tr>
<tr>
<td>Aquatic Life Protection (AMMONIA - N)</td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>1Q10</td>
</tr>
<tr>
<td>Chronic</td>
<td>30Q10</td>
</tr>
<tr>
<td>Human Health Protection &amp; MCL</td>
<td></td>
</tr>
<tr>
<td>Noncarcinogenic</td>
<td>30Q5</td>
</tr>
<tr>
<td>Carcinogenic</td>
<td>Harmonic mean</td>
</tr>
</tbody>
</table>

a. The allowable 3°C temperature increase criterion for warm water interior streams, 61.3(3)“b”(5)“1,” is based in part on the need to protect fish from cold shock due to rapid cessation of heat source and resultant return of the receiving stream temperature to natural background temperature. On low flow streams, in winter, during certain conditions of relatively cold background stream temperature and relatively warm ambient air and groundwater temperature, certain wastewater treatment plants with relatively constant flow and constant temperature discharges will cause temperature increases in the receiving stream greater than allowed in 61.3(3)“b”(5)“1.”

b. During the period November 1 to March 31, for the purpose of applying the 3°C temperature increase criterion, the minimum protected receiving stream flow rate below such discharges may be increased to not more than three times the rate of flow of the discharge, where there is reasonable assurance that the discharge is of such constant temperature and flow rate and continuous duration as to not constitute a threat of heat cessation and not cause the receiving stream temperature to vary more than 3°C per day.

c. Site-specific water quality criteria may be allowed in lieu of the specific numerical criteria listed in Tables 1 and 3 of this chapter if adequate documentation is provided to show that the proposed criteria will protect all existing or potential uses of the surface water. Site-specific water quality criteria may be appropriate where:

1. The types of organisms differ significantly from those used in setting the statewide criteria; or
2. The chemical characteristics of the surface water such as pH, temperature, and hardness differ significantly from the characteristics used in setting the statewide criteria.
Development of site-specific criteria shall include an evaluation of the chemical and biological characteristics of the water resource and an evaluation of the impact of the discharge. All evaluations for site-specific criteria modification must be coordinated through the department, and be conducted using scientifically accepted procedures approved by the department. Any site-specific criterion developed under the provisions of this subrule is subject to the review and approval of the U.S. Environmental Protection Agency. All criteria approved under the provisions of this subrule will be published periodically by the department. Guidelines for establishing site-specific water quality criteria can be found in “Water Quality Standards Handbook,” published by the U.S. Environmental Protection Agency, December 1983.

d. A wastewater treatment facility may submit to the department technically valid instream data which provides additional information to be used in the calculations of their wasteload allocations and effluent limitations. This information would be in association with the low flow characteristics, width, length and time of travel associated with the mixing zone or decay rates of various effluent parameters. The wasteload allocation will be calculated considering the applicable data and consistent with the provisions and restrictions in the rules.

e. The department may perform use assessment and related use attainability analyses on water bodies where uses may not be known or adequately documented. The preparation of use attainability analysis documents will consider available U.S. Environmental Protection Agency guidance or other applicable guidance. Credible data and documentation will be used to assist in the preparation of use assessments and use attainability analysis reports.

[ARC 8214B, IAB 10/7/09, effective 11/11/09; ARC 8466B, IAB 1/13/10, effective 2/17/10; ARC 9330B, IAB 1/12/11, effective 2/16/11 (See Delay note at end of chapter)]

567—61.3(455B) Surface water quality criteria.

61.3(1) Surface water classification. All waters of the state are classified for protection of beneficial uses. These classified waters include general use segments and designated use segments.

   a. General use segments. These are intermittent watercourses and those watercourses which typically flow only for short periods of time following precipitation and whose channels are normally above the water table. These waters do not support a viable aquatic community during low flow and do not maintain pooled conditions during periods of no flow.

   The general use segments are to be protected for livestock and wildlife watering, aquatic life, noncontact recreation, crop irrigation, and industrial, agricultural, domestic and other incidental water withdrawal uses.

   b. Designated use segments. These are water bodies which maintain flow throughout the year or contain sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community.

   All perennial rivers and streams as identified by the U.S. Geological Survey 1:100,000 DLG Hydrography Data Map (published July 1993) or intermittent streams with perennial pools in Iowa not specifically listed in the surface water classification of 61.3(5) are designated as Class B(WW-1) waters.

   All perennial rivers and streams as identified by the U.S. Geological Survey 1:100,000 DLG Hydrography Data Map (published July 1993) or intermittent streams with perennial pools in Iowa are designated as Class A1 waters.

   Designated uses of segments may change based on a use attainability analysis consistent with 61.2(5)"e." Designated use changes will be specifically listed in the surface water classification of 61.3(5).

   Designated use waters are to be protected for all uses of general use segments in addition to the specific uses assigned. Designated use segments include:

   (1) Primary contact recreational use (Class “A1”). Waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

   (2) Secondary contact recreational use (Class “A2”). Waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. During the recreational use,
the probability of ingesting appreciable quantities of water is minimal. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity.

3. Children’s recreational use (Class “A3”). Waters in which recreational uses by children are common. Class A3 waters are water bodies having definite banks and bed with visible evidence of the flow or occurrence of water. This type of use would primarily occur in urban or residential areas.

4. Cold water aquatic life—Type 1 (Class “B(CW1)”). Waters in which the temperature and flow are suitable for the maintenance of a variety of cold water species, including reproducing and nonreproducing populations of trout (Salmonidae family) and associated aquatic communities.

5. Cold water aquatic life—Type 2 (Class “B(CW2)”). Waters that include small, channeled streams, headwaters, and spring runs that possess natural cold water attributes of temperature and flow. These waters usually do not support consistent populations of trout (Salmonidae family), but may support associated vertebrate and invertebrate organisms.

6. Warm water—Type 1 (Class “B(WW-1)”). Waters in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrate species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

7. Warm water—Type 2 (Class “B(WW-2)”). Waters in which flow or other physical characteristics are capable of supporting a resident aquatic community that includes a variety of native nongame fish and invertebrate species. The flow and other physical characteristics limit the maintenance of warm water game fish populations. These waters generally consist of small perennially flowing streams.

8. Warm water—Type 3 (Class “B(WW-3)”). Waters in which flow persists during periods when antecedent soil moisture and groundwater discharge levels are adequate; however, aquatic habitat typically consists of nonflowing pools during dry periods of the year. These waters generally include small streams of marginally perennial aquatic habitat status. Such waters support a limited variety of native fish and invertebrate species that are adapted to survive in relatively harsh aquatic conditions.

9. Lakes and wetlands (Class “B(LW)”). These are artificial and natural impoundments with hydraulic retention times and other physical and chemical characteristics suitable to maintain a balanced community normally associated with lake-like conditions.

10. Human health (Class “HH”). Waters in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

11. Drinking water supply (Class “C”). Waters which are used as a raw water source of potable water supply.

61.3(2) General water quality criteria. The following criteria are applicable to all surface waters including general use and designated use waters, at all places and at all times for the uses described in 61.3(1)”a.”

a. Such waters shall be free from substances attributable to point source wastewater discharges that will settle to form sludge deposits.

b. Such waters shall be free from floating debris, oil, grease, scum and other floating materials attributable to wastewater discharges or agricultural practices in amounts sufficient to create a nuisance.

c. Such waters shall be free from materials attributable to wastewater discharges or agricultural practices producing objectionable color, odor or other aesthetically objectionable conditions.

d. Such waters shall be free from substances attributable to wastewater discharges or agricultural practices in concentrations or combinations which are acutely toxic to human, animal, or plant life.

e. Such waters shall be free from substances, attributable to wastewater discharges or agricultural practices, in quantities which would produce undesirable or nuisance aquatic life.

f. The turbidity of the receiving water shall not be increased by more than 25 Nephelometric turbidity units by any point source discharge.
g. Cations and anions guideline values to protect livestock watering may be found in the “Supporting Document for Iowa Water Quality Management Plans,” Chapter IV, July 1976, as revised on November 11, 2009.

h. The Escherichia coli (E. coli) content of water which enters a sinkhole or losing stream segment, regardless of the water body’s designated use, shall not exceed a Geometric Mean value of 126 organisms/100 ml or a sample maximum value of 235 organisms/100 ml. No new wastewater discharges will be allowed on watercourses which directly or indirectly enter sinkholes or losing stream segments.

61.3(3) Specific water quality criteria.

a. Class “A” waters. Waters which are designated as Class “A1,” “A2,” or “A3” in subrule 61.3(5) are to be protected for primary contact, secondary contact, and children’s recreational uses. The general criteria of subrule 61.3(2) and the following specific criteria apply to all Class “A” waters.

(1) The Escherichia coli (E. coli) content shall not exceed the levels noted in the Bacteria Criteria Table when the Class “A1,” “A2,” or “A3” uses can reasonably be expected to occur.

<table>
<thead>
<tr>
<th>Use or Category</th>
<th>Geometric Mean</th>
<th>Sample Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/15 – 11/15</td>
<td>126</td>
<td>235</td>
</tr>
<tr>
<td>11/16 – 3/14</td>
<td>Does not apply</td>
<td>Does not apply</td>
</tr>
<tr>
<td>Class A2 (Only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/15 – 11/15</td>
<td>630</td>
<td>2880</td>
</tr>
<tr>
<td>11/16 – 3/14</td>
<td>Does not apply</td>
<td>Does not apply</td>
</tr>
<tr>
<td>[Class A2 and B(CW)] or OIW or ONRW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year-Round</td>
<td>630</td>
<td>2880</td>
</tr>
<tr>
<td>Class A3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/15 – 11/15</td>
<td>126</td>
<td>235</td>
</tr>
<tr>
<td>11/16 – 3/14</td>
<td>Does not apply</td>
<td>Does not apply</td>
</tr>
</tbody>
</table>

Class A1 - Primary Contact Recreational Use
Class A2 - Secondary Contact Recreational Use
Class A3 - Children’s Recreational Use

When a water body is designated for more than one of the recreational uses, the most stringent criteria for the appropriate season shall apply.

(2) The pH shall not be less than 6.5 nor greater than 9.0. The maximum change permitted as a result of a waste discharge shall not exceed 0.5 pH units.

b. Class “B” waters. All waters which are designated as Class B(CW1), B(CW2), B(WW-1), B(WW-2), B(WW-3) or B(LW) are to be protected for wildlife, fish, aquatic, and semiaquatic life. The following criteria shall apply to all Class “B” waters designated in subrule 61.3(5).

(1) Dissolved oxygen. Dissolved oxygen shall not be less than the values shown in Table 2 of this subrule.

(2) pH. The pH shall not be less than 6.5 nor greater than 9.0. The maximum change permitted as a result of a waste discharge shall not exceed 0.5 pH units.

(3) General chemical constituents. The specific numerical criteria shown in Tables 1, 2, and 3 of this subrule apply to all waters designated in subrule 61.3(5). The sole determinant of compliance with these criteria will be established by the department on a case-by-case basis. Effluent monitoring or instream monitoring, or both, will be the required approach to determine compliance.
1. The acute criteria represent the level of protection necessary to prevent acute toxicity to aquatic life. Instream concentrations above the acute criteria will be allowed only within the boundaries of the zone of initial dilution.

2. The chronic criteria represent the level of protection necessary to prevent chronic toxicity to aquatic life. Excursions above the chronic criteria will be allowed only inside of mixing zones or only for short-term periods outside of mixing zones; however, these excursions cannot exceed the acute criteria shown in Tables 1 and 3. The chronic criteria will be met as short-term average conditions at all times the flow equals or exceeds either the design flows noted in subrule 61.2(5) or any site-specific low flow established under the provisions of subrule 61.2(5).

3. Rescinded IAB 2/15/06, effective 3/22/06.

4. Rescinded IAB 2/15/06, effective 3/22/06.

5. Temperature.

1. No heat shall be added to interior streams or the Big Sioux River that would cause an increase of more than 3°C. The rate of temperature change shall not exceed 1°C per hour. In no case shall heat be added in excess of that amount that would raise the stream temperature above 32°C.

2. No heat shall be added to streams designated as cold water fisheries that would cause an increase of more than 2°C. The rate of temperature change shall not exceed 1°C per hour. In no case shall heat be added in excess of that amount that would raise the stream temperature above 20°C.

3. No heat shall be added to lakes and reservoirs that would cause an increase of more than 2°C. The rate of temperature change shall not exceed 1°C per hour. In no case shall heat be added in excess of that amount that would raise the temperature of the lake or reservoirs above 32°C.

4. No heat shall be added to the Missouri River that would cause an increase of more than 3°C. The rate of temperature change shall not exceed 1°C per hour. In no case shall heat be added that would raise the stream temperature above 32°C.

5. No heat shall be added to the Mississippi River that would cause an increase of more than 3°C. The rate of temperature change shall not exceed 1°C per hour. In addition, the water temperature at representative locations in the Mississippi River shall not exceed the maximum limits in the table below during more than 1 percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the table below by more than 2°C.

Zone II—Iowa-Minnesota state line to the northern Illinois border (Mile Point 1534.6). Zone III—Northern Illinois border (Mile Point 1534.6) to Iowa-Missouri state line.

<table>
<thead>
<tr>
<th>Month</th>
<th>Zone II</th>
<th>Zone III</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>4°C</td>
<td>7°C</td>
</tr>
<tr>
<td>February</td>
<td>4°C</td>
<td>7°C</td>
</tr>
<tr>
<td>March</td>
<td>12°C</td>
<td>14°C</td>
</tr>
<tr>
<td>April</td>
<td>18°C</td>
<td>20°C</td>
</tr>
<tr>
<td>May</td>
<td>24°C</td>
<td>26°C</td>
</tr>
<tr>
<td>June</td>
<td>29°C</td>
<td>29°C</td>
</tr>
<tr>
<td>July</td>
<td>29°C</td>
<td>30°C</td>
</tr>
<tr>
<td>August</td>
<td>29°C</td>
<td>30°C</td>
</tr>
<tr>
<td>September</td>
<td>28°C</td>
<td>29°C</td>
</tr>
<tr>
<td>October</td>
<td>23°C</td>
<td>24°C</td>
</tr>
<tr>
<td>November</td>
<td>14°C</td>
<td>18°C</td>
</tr>
<tr>
<td>December</td>
<td>9°C</td>
<td>11°C</td>
</tr>
</tbody>
</table>

6. Early life stage for each use designation. The following seasons will be used in applying the early life stage present chronic criteria noted in Table 3b, “Chronic Criterion for Ammonia in Iowa Streams - Early Life Stages Present.”

1. For all Class B(CW1) waters, the early life stage will be year-round.
2. For all Class B(CW2) waters, the early life stage will begin on April 1 and last through September 30.
3. For all Class B(WW-1) waters, the early life stage will begin in March and last through September, except as follows:
   - For the following, the early life stage will begin in February and last through September:
     — The entire length of the Mississippi and Missouri Rivers,
     — The lower reach of the Des Moines River south of the Ottumwa dam, and
     — The lower reach of the Iowa River below the Cedar River.
   - For the following, the early life stage will begin in April and last through September:
     — All Class B(WW-1) waters in the Southern Iowa River Basin,
     — All of the Class B(WW-1) reach of the Skunk River, the North Skunk River and the South Skunk River south of Indian Creek (Jasper County), and the Class B(WW-1) tributaries to these reaches, and
     — The entire Class B(WW-1) reach of the English River.
4. For all Class B(WW-2) and Class B(WW-3) waters, the early life stage will begin in April and last through September.
5. For all Class B(LW) lake and wetland waters, the early life stage will begin in March and last through September except for the Class B(LW) waters in the southern two tiers of Iowa counties which will have the early life stage of April through September.
   c. Class “C” waters. Waters which are designated as Class “C” are to be protected as a raw water source of potable water supply. The following criteria shall apply to all Class “C” waters designated in subrule 61.3(5).
   (1) Radioactive substances.
      1. The combined radium-226 and radium-228 shall not exceed 5 picocuries per liter at the point of withdrawal.
      2. Gross alpha particle activity (including radium-226 but excluding radon and uranium) shall not exceed 15 picocuries per liter at the point of withdrawal.
      3. The average annual concentration at the point of withdrawal of beta particle and photon radioactivity from man-made radionuclides other than tritium and strontium-90 shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year.
      4. The average annual concentration of tritium shall not exceed 20,000 picocuries per liter at the point of withdrawal; the average annual concentration of strontium-90 shall not exceed 8 picocuries per liter at the point of withdrawal.
      (2) All substances toxic or detrimental to humans or detrimental to treatment process shall be limited to nontoxic or nondetrimental concentrations in the surface water.
      (3) The pH shall not be less than 6.5 nor greater than 9.0.
   d. Class “HH” waters. Waters which are designated as Class HH shall contain no substances in concentrations which will make fish or shellfish inedible due to undesirable tastes or cause a hazard to humans after consumption.
      (1) The human health criteria represent the level of protection necessary, in the case of noncancerogens, to prevent adverse health effects in humans and, in the case of carcinogens, to prevent a level of incremental cancer risk not exceeding 1 in 100,000. Instream concentrations in excess of the human health criteria will be allowed only within the boundaries of the mixing zone.
      (2) Reserved.

**TABLE 1. Criteria for Chemical Constituents**

(All values as micrograms per liter as total recoverable unless noted otherwise)

<table>
<thead>
<tr>
<th>Chemical Constituents</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human health criteria for carcinogenic parameters noted below were based on the prevention of an incremental cancer risk of 1 in 100,000. For parameters not having a noted human health criterion, the U.S. Environmental Protection Agency has not developed final national human health guideline values. For noncancerogenic parameters, the recommended EPA criterion was selected. For Class C waters, the EPA criteria for fish and water consumption were selected using the same considerations for carcinogenic and noncancerogenic parameters as noted above. For Class C waters for which no EPA human health criteria were available, the EPA MCL value was selected.</td>
<td></td>
</tr>
<tr>
<td>Parameter</td>
<td>Use Designations</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Atachlor</td>
<td>MCL</td>
</tr>
<tr>
<td>Aldrin</td>
<td>Acute</td>
</tr>
<tr>
<td></td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Chronic</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
</tr>
<tr>
<td>Antimony</td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Arsenic (III)</td>
<td>Chronic</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
</tr>
<tr>
<td></td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Asbestos</td>
<td>Human Health</td>
</tr>
<tr>
<td>Atrazine</td>
<td>MCL</td>
</tr>
<tr>
<td>Barium</td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Benzene</td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Benzo(a)Pyrene</td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Beryllium</td>
<td>MCL</td>
</tr>
<tr>
<td>Bromoform</td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Cadmium</td>
<td>Chronic</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
</tr>
<tr>
<td></td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Carbofuran</td>
<td>MCL</td>
</tr>
<tr>
<td>Carbon Tetrachloride</td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Chlordane</td>
<td>Chronic</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
</tr>
<tr>
<td></td>
<td>Human Health</td>
</tr>
<tr>
<td></td>
<td>F &amp; W</td>
</tr>
<tr>
<td>Parameter</td>
<td>Use Designations</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Chloride</td>
<td>Chronic</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
</tr>
<tr>
<td></td>
<td>MCL</td>
</tr>
<tr>
<td>Chlorobenzene</td>
<td>Human Health + — Fish</td>
</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
</tr>
<tr>
<td></td>
<td>MCL</td>
</tr>
<tr>
<td>Chlorodibromomethane</td>
<td>Human Health — F &amp; W</td>
</tr>
<tr>
<td></td>
<td>Human Health — Fish</td>
</tr>
<tr>
<td>Chloroform</td>
<td>Human Health — F &amp; W</td>
</tr>
<tr>
<td></td>
<td>Human Health — Fish</td>
</tr>
<tr>
<td>Chlorpyrifos</td>
<td>Chronic</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
</tr>
<tr>
<td>Chromium (VI)</td>
<td>Chronic</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
</tr>
<tr>
<td></td>
<td>Human Health + — Fish</td>
</tr>
<tr>
<td></td>
<td>MCL</td>
</tr>
<tr>
<td>Copper</td>
<td>Chronic</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
</tr>
<tr>
<td></td>
<td>Human Health + — Fish</td>
</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
</tr>
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<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Trihalomethanes (total)^{3,4}</td>
<td>MCL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>80</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>Human Health — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health — Fish</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Xylenes (Total)</td>
<td>MCL</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>10</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Zinc</td>
<td>Chronic</td>
<td>200</td>
<td>215</td>
<td>215</td>
<td>215</td>
<td>100</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>220</td>
<td>215</td>
<td>215</td>
<td>215</td>
<td>110</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health + — Fish</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Human Health + — F &amp; W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

* units expressed as milligrams/liter

** to include the sum of known and suspected carcinogenic PAHs (includes benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene)

† expressed as nanograms/liter

‡ represents the noncarcinogenic human health parameters

+++ The concentrations of 4,4-DDT or its metabolites; 4,4-DDE and 4,4-DDD, individually shall not exceed the human health criteria.

(a) units expressed as million fibers/liter (longer than 10 micrometers)

(b) includes alpha-endosulfan, beta-endosulfan, and endosulfan sulfate in combination or as individually measured

(c) The sum of the four trihalomethanes (bromoform [tribromomethane], chlorodibromomethane, chloroform [trichloromethane], and dichlorobromomethane) may not exceed the MCL.

(d) Class B numerical criteria for pentachlorophenol are a function of pH using the equation: Criterion (μg/l) = e^{1.005(pH) - 8.3}, where e = 2.71828 and x varies according to the following table:
This Class HI criterion would be applicable to any Class B(LW), B(CW1), B(WW-1), B(WW-2), or B(WW-3) water body that is also designated Class HI.

Class B(WW-1), B(WW-2), and B(WW-3) criteria listed in the main table are based on a hardness of 200 mg/l (as CaCO₃ (mg/l)). Numerical criteria (μg/l) for cadmium are a function of hardness (as CaCO₃ (mg/l)) using the equation for each use according to the following table:

<table>
<thead>
<tr>
<th></th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>$e^{(1.0166 \ln(\text{Hardness}) - 3.924)}$</td>
<td>$e^{(1.0166 \ln(\text{Hardness}) - 3.924)}$</td>
<td>$e^{(1.0166 \ln(\text{Hardness}) - 3.924)}$</td>
</tr>
<tr>
<td>Chronic</td>
<td>$e^{(0.7409 \ln(\text{Hardness}) - 4.719)}$</td>
<td>$e^{(0.7409 \ln(\text{Hardness}) - 4.719)}$</td>
<td>$e^{(0.7409 \ln(\text{Hardness}) - 4.719)}$</td>
</tr>
</tbody>
</table>

Class B(WW-1), B(WW-2), and B(WW-3) criteria listed in the main table are based on a hardness of 200 mg/l (as CaCO₃ (mg/l)). Numerical criteria (μg/l) for copper are a function of hardness (CaCO₃ (mg/l)) using the equation for each use according to the following table:

<table>
<thead>
<tr>
<th></th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>$e^{(0.9422 \ln(\text{Hardness}) - 1.700)}$</td>
<td>$e^{(0.9422 \ln(\text{Hardness}) - 1.700)}$</td>
<td>$e^{(0.9422 \ln(\text{Hardness}) - 1.700)}$</td>
</tr>
<tr>
<td>Chronic</td>
<td>$e^{(0.8545 \ln(\text{Hardness}) - 1.702)}$</td>
<td>$e^{(0.8545 \ln(\text{Hardness}) - 1.702)}$</td>
<td>$e^{(0.8545 \ln(\text{Hardness}) - 1.702)}$</td>
</tr>
</tbody>
</table>

Class B(WW-1), B(WW-2), and B(WW-3) criteria listed in the main table are based on a hardness of 200 mg/l (as CaCO₃ (mg/l)). Numerical criteria (μg/l) for lead are a function of hardness (CaCO₃ (mg/l)) using the equation for each use according to the following table:

<table>
<thead>
<tr>
<th></th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>$e^{(1.2731 \ln(\text{Hardness}) - 1.46)}$</td>
<td>$e^{(1.2731 \ln(\text{Hardness}) - 1.46)}$</td>
<td>$e^{(1.2731 \ln(\text{Hardness}) - 1.46)}$</td>
</tr>
<tr>
<td>Chronic</td>
<td>$e^{(1.2731 \ln(\text{Hardness}) - 4.705)}$</td>
<td>$e^{(1.2731 \ln(\text{Hardness}) - 4.705)}$</td>
<td>$e^{(1.2731 \ln(\text{Hardness}) - 4.705)}$</td>
</tr>
</tbody>
</table>

Class B(WW-1), B(WW-2), and B(WW-3) criteria listed in the main table are based on a hardness of 200 mg/l (as CaCO₃ (mg/l)). Numerical criteria (μg/l) for nickel are a function of hardness (CaCO₃ (mg/l)) using the equation for each use according to the following table:

<table>
<thead>
<tr>
<th></th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>$e^{(0.8466 \ln(\text{Hardness}) + 2.255)}$</td>
<td>$e^{(0.8466 \ln(\text{Hardness}) + 2.255)}$</td>
<td>$e^{(0.8466 \ln(\text{Hardness}) + 2.255)}$</td>
</tr>
<tr>
<td>Chronic</td>
<td>$e^{(0.8466 \ln(\text{Hardness}) + 0.0584)}$</td>
<td>$e^{(0.8466 \ln(\text{Hardness}) + 0.0584)}$</td>
<td>$e^{(0.8466 \ln(\text{Hardness}) + 0.0584)}$</td>
</tr>
</tbody>
</table>

Class B(WW-1), B(WW-2), and B(WW-3) criteria listed in the main table are based on a hardness of 200 mg/l (as CaCO₃ (mg/l)). Numerical criteria (μg/l) for zinc are a function of hardness (CaCO₃ (mg/l)) using the equation for each use according to the following table:

<table>
<thead>
<tr>
<th></th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>$e^{(0.8473 \ln(\text{Hardness}) + 0.884)}$</td>
<td>$e^{(0.8473 \ln(\text{Hardness}) + 0.884)}$</td>
<td>$e^{(0.8473 \ln(\text{Hardness}) + 0.884)}$</td>
</tr>
<tr>
<td>Chronic</td>
<td>$e^{(0.8473 \ln(\text{Hardness}) + 0.884)}$</td>
<td>$e^{(0.8473 \ln(\text{Hardness}) + 0.884)}$</td>
<td>$e^{(0.8473 \ln(\text{Hardness}) + 0.884)}$</td>
</tr>
</tbody>
</table>

Acute and chronic criteria listed in the main table are based on a hardness of 200 mg/l (as CaCO₃ (mg/l)) and a sulfate concentration of 63 mg/l. Numerical criteria (μg/l) for chloride are a function of hardness (CaCO₃ (mg/l)) and sulfate (mg/l) using the equation for each use according to the following table:

<table>
<thead>
<tr>
<th></th>
<th>B(CW1), B(CW2), B(WW-1), B(WW-2), B(WW-3), B(LW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>287.8[Hardness]² + 0.0742</td>
</tr>
<tr>
<td>Chronic</td>
<td>177.87[Hardness]² + 0.0742</td>
</tr>
</tbody>
</table>
### TABLE 2. Criteria for Dissolved Oxygen
*(all values expressed in milligrams per liter)*

<table>
<thead>
<tr>
<th></th>
<th>B(CW1)</th>
<th>B(CW2)</th>
<th>B(WW-1)</th>
<th>B(WW-2)</th>
<th>B(WW-3)</th>
<th>B(LW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum value for at least 16 hours of every 24-hour period</td>
<td>7.0</td>
<td>7.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0*</td>
</tr>
<tr>
<td>Minimum value at any time during every 24-hour period</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>4.0</td>
<td>4.0</td>
<td>5.0*</td>
</tr>
</tbody>
</table>

*applies only to the upper layer of stratification in lakes*

### TABLE 3a. Acute Criterion for Ammonia in Iowa Streams

<table>
<thead>
<tr>
<th>pH</th>
<th>Acute Criterion, mg/l as N (or Criterion Maximum Concentration, CMC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class B(WW-1), B(WW-2), B(WW-3) &amp; B(LW)</td>
</tr>
<tr>
<td>6.5</td>
<td>48.8</td>
</tr>
<tr>
<td>6.6</td>
<td>46.8</td>
</tr>
<tr>
<td>6.7</td>
<td>44.6</td>
</tr>
<tr>
<td>6.8</td>
<td>42.0</td>
</tr>
<tr>
<td>6.9</td>
<td>39.1</td>
</tr>
<tr>
<td>7.0</td>
<td>36.1</td>
</tr>
<tr>
<td>7.1</td>
<td>32.8</td>
</tr>
<tr>
<td>7.2</td>
<td>29.5</td>
</tr>
<tr>
<td>7.3</td>
<td>26.2</td>
</tr>
<tr>
<td>7.4</td>
<td>23.0</td>
</tr>
<tr>
<td>7.5</td>
<td>19.9</td>
</tr>
<tr>
<td>7.6</td>
<td>17.0</td>
</tr>
<tr>
<td>7.7</td>
<td>14.4</td>
</tr>
<tr>
<td>7.8</td>
<td>12.1</td>
</tr>
<tr>
<td>7.9</td>
<td>10.1</td>
</tr>
<tr>
<td>8.0</td>
<td>8.40</td>
</tr>
<tr>
<td>8.1</td>
<td>6.95</td>
</tr>
<tr>
<td>8.2</td>
<td>5.72</td>
</tr>
<tr>
<td>8.3</td>
<td>4.71</td>
</tr>
<tr>
<td>8.4</td>
<td>3.88</td>
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<tr>
<td>8.5</td>
<td>3.20</td>
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<tr>
<td>8.6</td>
<td>2.65</td>
</tr>
<tr>
<td>8.7</td>
<td>2.20</td>
</tr>
<tr>
<td>8.8</td>
<td>1.84</td>
</tr>
<tr>
<td>8.9</td>
<td>1.56</td>
</tr>
<tr>
<td>9.0</td>
<td>1.32</td>
</tr>
</tbody>
</table>
### TABLE 3b. Chronic Criterion for Ammonia in Iowa Streams - Early Life Stages Present

<table>
<thead>
<tr>
<th>pH</th>
<th>0</th>
<th>14</th>
<th>16</th>
<th>18</th>
<th>20</th>
<th>22</th>
<th>24</th>
<th>26</th>
<th>28</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5</td>
<td>6.67</td>
<td>6.67</td>
<td>6.06</td>
<td>5.33</td>
<td>4.68</td>
<td>4.12</td>
<td>3.62</td>
<td>3.18</td>
<td>2.80</td>
<td>2.46</td>
</tr>
<tr>
<td>6.6</td>
<td>6.57</td>
<td>6.57</td>
<td>5.97</td>
<td>5.25</td>
<td>4.61</td>
<td>4.05</td>
<td>3.56</td>
<td>3.13</td>
<td>2.75</td>
<td>2.42</td>
</tr>
<tr>
<td>6.7</td>
<td>6.44</td>
<td>6.44</td>
<td>5.86</td>
<td>5.15</td>
<td>4.52</td>
<td>3.98</td>
<td>3.50</td>
<td>3.07</td>
<td>2.70</td>
<td>2.37</td>
</tr>
<tr>
<td>6.8</td>
<td>6.29</td>
<td>6.29</td>
<td>5.72</td>
<td>5.03</td>
<td>4.42</td>
<td>3.89</td>
<td>3.42</td>
<td>3.00</td>
<td>2.64</td>
<td>2.32</td>
</tr>
<tr>
<td>6.9</td>
<td>6.12</td>
<td>6.12</td>
<td>5.56</td>
<td>4.89</td>
<td>4.30</td>
<td>3.78</td>
<td>3.32</td>
<td>2.92</td>
<td>2.57</td>
<td>2.25</td>
</tr>
<tr>
<td>7.0</td>
<td>5.91</td>
<td>5.91</td>
<td>5.37</td>
<td>4.72</td>
<td>4.15</td>
<td>3.65</td>
<td>3.21</td>
<td>2.82</td>
<td>2.48</td>
<td>2.18</td>
</tr>
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<td>5.67</td>
<td>5.67</td>
<td>5.15</td>
<td>4.53</td>
<td>3.98</td>
<td>3.50</td>
<td>3.08</td>
<td>2.70</td>
<td>2.38</td>
<td>2.09</td>
</tr>
<tr>
<td>7.2</td>
<td>5.39</td>
<td>5.39</td>
<td>4.90</td>
<td>4.31</td>
<td>3.78</td>
<td>3.33</td>
<td>2.92</td>
<td>2.57</td>
<td>2.26</td>
<td>1.99</td>
</tr>
<tr>
<td>7.3</td>
<td>5.08</td>
<td>5.08</td>
<td>4.61</td>
<td>4.06</td>
<td>3.57</td>
<td>3.13</td>
<td>2.76</td>
<td>2.42</td>
<td>2.13</td>
<td>1.87</td>
</tr>
<tr>
<td>7.4</td>
<td>4.73</td>
<td>4.73</td>
<td>4.30</td>
<td>3.78</td>
<td>3.32</td>
<td>2.92</td>
<td>2.57</td>
<td>2.26</td>
<td>1.98</td>
<td>1.74</td>
</tr>
<tr>
<td>7.5</td>
<td>4.36</td>
<td>4.36</td>
<td>3.97</td>
<td>3.49</td>
<td>3.06</td>
<td>2.69</td>
<td>2.37</td>
<td>2.08</td>
<td>1.83</td>
<td>1.61</td>
</tr>
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<td>3.99</td>
<td>3.98</td>
<td>3.61</td>
<td>3.18</td>
<td>2.79</td>
<td>2.45</td>
<td>2.16</td>
<td>1.90</td>
<td>1.67</td>
<td>1.47</td>
</tr>
<tr>
<td>7.7</td>
<td>3.59</td>
<td>3.58</td>
<td>3.25</td>
<td>2.86</td>
<td>2.51</td>
<td>2.21</td>
<td>1.94</td>
<td>1.71</td>
<td>1.50</td>
<td>1.32</td>
</tr>
<tr>
<td>7.8</td>
<td>3.18</td>
<td>3.18</td>
<td>2.89</td>
<td>2.54</td>
<td>2.23</td>
<td>1.96</td>
<td>1.73</td>
<td>1.52</td>
<td>1.33</td>
<td>1.17</td>
</tr>
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<td>2.8</td>
<td>2.54</td>
<td>2.24</td>
<td>1.96</td>
<td>1.73</td>
<td>1.52</td>
<td>1.33</td>
<td>1.17</td>
<td>1.03</td>
</tr>
<tr>
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<td>2.43</td>
<td>2.21</td>
<td>1.94</td>
<td>1.71</td>
<td>1.50</td>
<td>1.32</td>
<td>1.16</td>
<td>1.02</td>
<td>0.897</td>
</tr>
<tr>
<td>8.1</td>
<td>2.10</td>
<td>2.10</td>
<td>1.91</td>
<td>1.68</td>
<td>1.47</td>
<td>1.29</td>
<td>1.14</td>
<td>1.00</td>
<td>0.879</td>
<td>0.773</td>
</tr>
<tr>
<td>8.2</td>
<td>1.79</td>
<td>1.79</td>
<td>1.63</td>
<td>1.43</td>
<td>1.26</td>
<td>1.11</td>
<td>0.973</td>
<td>0.855</td>
<td>0.752</td>
<td>0.661</td>
</tr>
<tr>
<td>8.3</td>
<td>1.52</td>
<td>1.52</td>
<td>1.39</td>
<td>1.22</td>
<td>1.07</td>
<td>0.941</td>
<td>0.827</td>
<td>0.727</td>
<td>0.639</td>
<td>0.562</td>
</tr>
<tr>
<td>8.4</td>
<td>1.29</td>
<td>1.29</td>
<td>1.17</td>
<td>1.03</td>
<td>0.906</td>
<td>0.796</td>
<td>0.700</td>
<td>0.615</td>
<td>0.541</td>
<td>0.475</td>
</tr>
<tr>
<td>8.5</td>
<td>1.09</td>
<td>1.09</td>
<td>0.990</td>
<td>0.870</td>
<td>0.765</td>
<td>0.672</td>
<td>0.591</td>
<td>0.520</td>
<td>0.457</td>
<td>0.401</td>
</tr>
<tr>
<td>8.6</td>
<td>0.920</td>
<td>0.920</td>
<td>0.836</td>
<td>0.735</td>
<td>0.646</td>
<td>0.568</td>
<td>0.499</td>
<td>0.439</td>
<td>0.386</td>
<td>0.339</td>
</tr>
<tr>
<td>8.7</td>
<td>0.778</td>
<td>0.778</td>
<td>0.707</td>
<td>0.622</td>
<td>0.547</td>
<td>0.480</td>
<td>0.422</td>
<td>0.371</td>
<td>0.326</td>
<td>0.287</td>
</tr>
<tr>
<td>8.8</td>
<td>0.661</td>
<td>0.661</td>
<td>0.601</td>
<td>0.528</td>
<td>0.464</td>
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### TABLE 3c. Chronic Criterion for Ammonia in Iowa Streams - Early Life Stages Absent

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*At 15°C and above, the criterion for fish early life stage (ELS) absent is the same as the criterion for fish ELS present.

**TABLE 4. Aquatic Life Criteria for Sulfate for Class B Waters**
*(all values expressed in milligrams per liter)*

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<tr>
<th>Chloride</th>
<th>Hardness mg/l as CaCO₃</th>
<th>5 = Cl⁻ &lt; 25</th>
<th>25 = Cl⁻ ≤ 500</th>
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<td>Cl⁻ &lt; 5 mg/l</td>
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<tr>
<td>5 = Cl⁻ &lt; 25&lt;sup&gt;*&lt;/sup&gt;</td>
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<td>25 = Cl⁻ ≤ 500&lt;sup&gt;*&lt;/sup&gt;</td>
<td>500</td>
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</tbody>
</table>

61.3(4) Class “C” waters. Rescinded IAB 4/18/90, effective 5/23/90.


61.3(8) Recreational use assessment and attainability analysis protocol. The department hereby incorporates by reference “Recreational Use Assessment and Attainability Analysis Protocol,” effective March 19, 2008. This document may be obtained on the department’s Web site.

This rule is intended to implement Iowa Code chapter 455B, division I, and division III, part 1. [ARC 8039B, IAB 8/12/09, effective 9/16/09; ARC 8214B, IAB 10/7/09, effective 11/11/09; ARC 8226B, IAB 10/7/09, effective 11/11/09; ARC 8466B, IAB 1/13/10, effective 2/17/10; ARC 9223B, IAB 11/17/10, effective 12/22/10]
567—61.4 to 61.9 Reserved.

VOLUNTEER MONITORING DATA REQUIREMENTS

567—61.10(455B) Purpose. The department uses water quality monitoring data for a number of purposes, including determining compliance with effluent limits for operation permits issued under 567—Chapter 64. The department also uses water quality monitoring data to determine the relative health of a water body by comparing monitoring data to the appropriate water quality standards established in 567—Chapter 61, a process known as water body assessments. Water body assessments are performed to prepare the biennial water quality report required under Section 305(b) of the Act and the list of impaired waters under Section 303(d) of the Act.

Iowa Code sections 455B.193 to 455B.195 require that credible data, as defined in Iowa Code section 455B.171, be used for the purpose of preparing Section 303(d) lists and other water quality program functions. Data provided by a volunteer are not considered credible data unless provided by a qualified volunteer. The purpose of this chapter is to establish minimum requirements for data produced by volunteers to meet the credible data and qualified volunteer requirements.

567—61.11(455B) Monitoring plan required. Volunteer water quality monitoring data submitted to the department must have been produced in accordance with a department-approved volunteer water quality monitoring plan before the data may be used for any of the purposes listed in Iowa Code section 455B.194. Approval of a plan will establish qualified volunteer status for the personnel identified in the plan for those monitoring activities covered under the plan.

61.11(1) Submittal of the plan. Prior to initiation of volunteer water quality monitoring activities intended to produce credible data, a water quality monitoring plan must be submitted to the department for review and approval. The plan must be submitted to the Volunteer Monitoring Coordinator, Department of Natural Resources, Wallace State Office Building, Des Moines, Iowa 50319, a minimum of 90 days before planned initiation of volunteer monitoring activities. A letter transmitting the plan must specifically request formal review and approval of the plan and identify a contact person. Volunteer monitors are encouraged to communicate with the department and to attend volunteer monitoring training sessions prior to formal submittal of a plan.

61.11(2) Content of the plan. A volunteer monitoring plan must contain, at a minimum, the following to be considered an acceptable volunteer monitoring plan:

a. A statement of the intent of the monitoring effort.

b. The name(s) of the person or persons that will be involved in data collection or analysis, the specific responsibilities of each person or group of people, and the general qualifications of the volunteers to carry out those responsibilities. For groups, such as educational institutions, it will be acceptable to identify the persons involved by general description (e.g., tenth grade biology class) with the exception of persons in responsible charge.

c. The name(s) of the person or persons that will oversee the monitoring plan, ensure that quality assurance and control objectives are being met, and certify the data. The person or persons in responsible charge must have training commensurate with the level of expertise to ensure that credible data is being generated.

d. The duration of the volunteer monitoring effort. In general, the department will not approve plans of greater than three years’ duration unless a longer duration is justified.

e. Location and frequency of sample collection.

f. Methods of data collection and analysis.

g. Record keeping and data reporting procedures.

61.11(3) Department review of the plan. The department will review monitoring plans and normally approve or disapprove the plan within 90 days of receipt. The department will work with the contact person identified in the plan to make any necessary changes prior to taking formal action. The department will use guidelines contained in the publications EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5, 2001) and Volunteer Monitor’s Guide to Quality Assurance Project Plans (1966, EPA...
841-B-96-003) or equivalent updates to determine if the plans provide adequate quality assurance and quality control measures. Approval or disapproval of the plan will be in the form of a letter and approval may include conditions or limitations.

61.11(4) Changes in monitoring plans. The department must approve any changes to an approved monitoring plan. Data collected under a modified plan will not be considered credible data until such time as the department has approved the modifications. Modifications to an approved plan should be submitted at the earliest possible time to avoid interruptions in data collection and to ensure continuity of data.

61.11(5) Appeal of disapproval. If a monitoring plan submitted for approval is disapproved, the decision may be appealed by filing an appeal with the director within 30 days of disapproval. The form of the notice of appeal and appeal procedures are governed by 567—Chapter 7.

567—61.12(455B) Use of volunteer monitoring data. Data produced under an approved water quality monitoring plan will be considered credible data for the purposes listed in Iowa Code section 455B.194 if the following conditions are met.

61.12(1) Data submittal. A qualified volunteer monitor or qualified volunteer monitoring group must specifically request that data produced under an approved volunteer monitoring plan be considered credible data. A letter identifying the specific data must be submitted along with a certification from the volunteer or the person in responsible charge for volunteer groups that the data, to the best of the volunteer’s or responsible person’s knowledge, was produced in accordance with the approved volunteer monitoring plan. The department shall provide a standard format on the IOWATER Web site for submittal of qualified volunteer data and related information. The department encourages volunteers to enter monitoring data on the IOWATER volunteer monitoring database maintained by the department, but doing so does not constitute submittal to or acceptance of the data by the department for uses requiring credible data. Volunteer data shall be labeled as such in any departmental reports, Web sites, or databases.

61.12(2) Department review of submitted data. The department must review and approve the submitted data. The person submitting the data will be informed of the department’s decision either to accept or reject the data. The department will attempt to resolve any apparent inconsistencies or questionable values in the submitted data prior to making a final decision.

567—61.13(455B) Department audits of volunteer monitoring activities. The department shall conduct field audits of a statistically valid and representative sample of volunteer data collection and analysis procedures to ensure compliance with an approved plan and may conduct confirmatory monitoring tests. Volunteers shall be informed of any audit results and be provided with an opportunity to address any concerns to the extent possible. The department reserves the right to rescind approval of an approved plan if it finds substantial problems that cannot be addressed in a timely manner to ensure the quality of the data being produced.

These rules are intended to implement Iowa Code chapter 455B, division III, part 1.

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[Filed 1/31/92, Notice 7/10/91—published 2/19/92, effective 3/25/92]
[Filed 2/28/92, Notice 11/13/91—published 3/18/92, effective 4/22/92]
[Filed 5/22/92, Notice 4/1/92—published 6/10/92, effective 7/15/92]
[Filed 7/31/92, Notice 5/13/92—published 8/19/92, effective 9/23/92]
[Filed 10/23/92, Notice 9/2/92—published 11/11/92, effective 12/16/92]
[Filed 5/21/93, Notice 2/17/93—published 6/9/93, effective 7/14/93]
[Filed 7/2/93, Notice 2/17/93—published 7/21/93, effective 8/25/93]
[Filed 10/22/93, Notice 8/18/93—published 11/10/93, effective 12/15/93]
[Filed 5/19/95, Notice 2/15/95—published 6/7/95, effective 8/9/95]
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[Filed 2/23/96, Notice 12/20/95—published 3/13/96, effective 4/17/96]
[Filed 5/31/96, Notice 3/13/96—published 6/19/96, effective 7/24/96]
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[Filed ARC 8226B (Notice ARC 7624B, IAB 3/11/09), IAB 10/7/09, effective 11/11/09]
[Filed ARC 8214B (Notice ARC 7853B, IAB 6/17/09), IAB 10/7/09, effective 11/11/09]
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[Filed ARC 9330B (Notice ARC 9153B, IAB 10/20/10), IAB 11/12/11, effective 2/16/11)]

[Editorial change: IAC Supplement 2/23/11]

0 Two or more ARCs

1 February 16, 2011, effective date of 61.2(2)”g”(8) delayed 70 days by the Administrative Rules Review Committee at its meeting held February 11, 2011.
Pollution Prevention Act of 1990

UNITED STATES CODE TITLE 42
THE PUBLIC HEALTH AND WELFARE
CHAPTER 133

POLLUTION PREVENTION

§ 13101. Findings and policy
§ 13102. Definitions
§ 13103. EPA activities
§ 13104. Grants to States for State technical assistance programs
§ 13105. Source Reduction Clearinghouse
§ 13106. Source reduction and recycling data collection
§ 13107. EPA report
§ 13108. Savings provisions
§ 13109. Authorization of appropriations

§ 13101. Findings and policy

(a) Findings

The Congress finds that:
(1) The United States of America annually produces millions of tons of pollution and spends tens of billions of dollars per year controlling this pollution.
(2) There are significant opportunities for industry to reduce or prevent pollution at the source through cost-effective changes in production, operation, and raw materials use. Such changes offer industry substantial savings in reduced raw material, pollution control, and liability costs as well as help protect the environment and reduce risks to worker health and safety.
(3) The opportunities for source reduction are often not realized because existing regulations, and the industrial resources they require for compliance, focus upon treatment and disposal, rather than source reduction; existing regulations do not emphasize multi-media management of pollution; and businesses need information and technical assistance to overcome institutional barriers to the adoption of source reduction practices.
(4) Source reduction is fundamentally different and more desirable than waste management and pollution control. The Environmental Protection Agency needs to address the historical lack of attention to source reduction.
(5) As a first step in preventing pollution through source reduction, the Environmental Protection Agency must establish a source reduction program.
which collects and disseminates information, provides financial assistance to States, and implements the other activities provided for in this chapter.

(b) Policy

The Congress hereby declares it to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.

§ 13102. Definitions

For purposes of this chapter

1. The term "Administrator" means the Administrator of the Environmental Protection Agency.
2. The term "Agency" means the Environmental Protection Agency.
3. The term "toxic chemical" means any substance on the list described in section 11023(c) of this title.
4. The term "release" has the same meaning as provided by section 11049(8) of this title.
5. (A) The term "source reduction" means any practice which -
   (i) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and
   (ii) reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants. The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

(B) The term "source reduction" does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is not integral to and necessary for the production of a product or the providing of a service.

6. The term multimedia means water, air, and land.
7. The term "SIC codes" refers to the 2-digit code numbers used for classification of economic activity in the Standard Industrial Classification Manual.
§ 13103. EPA activities

(a) Authorities

The Administrator shall establish in the Agency an office to carry out the functions of the Administrator under this chapter. The office shall be independent of the Agency's single-medium program offices but shall have the authority to review and advise such offices on their activities to promote a multimedia approach to source reduction. The office shall be under the direction of such officer of the Agency as the Administrator shall designate.

(b) Functions

The Administrator shall develop and implement a strategy to promote source reduction. As part of the strategy, the Administrator shall -

1. establish standard methods of measurement of source reduction;
2. ensure that the Agency considers the effect of its existing and proposed programs on source reduction efforts and shall review regulations of the Agency prior and subsequent to their proposal to determine their effect on source reduction;
3. coordinate source reduction activities in each Agency Office (FOOTNOTE 1) and coordinate with appropriate offices to promote source reduction practices in other Federal agencies, and generic research and development on techniques and processes which have broad applicability;
(FOOTNOTE 1) So in original. Probably should not be capitalized.
4. develop improved methods of coordinating, streamlining and assuring public access to data collected under Federal environmental statutes;
5. facilitate the adoption of source reduction techniques by businesses. This strategy shall include the use of the Source Reduction Clearinghouse and State matching grants provided in this chapter to foster the exchange of information regarding source reduction techniques, the dissemination of such information to businesses, and the provision of technical assistance to businesses. The strategy shall also consider the capabilities of various businesses to make use of source reduction techniques;
6. identify, where appropriate, measurable goals which reflect the policy of this chapter, the tasks necessary to achieve the goals, dates at which the principal tasks are to be accomplished, required resources, organizational responsibilities, and the means by which progress in meeting the goals will be measured;
7. (FOOTNOTE 2) establish an advisory panel of technical experts comprised of representatives from industry, the States, and public interest groups, to advise the Administrator on ways to improve collection and dissemination of data;
(FOOTNOTE 2) So in original. Subsec. (b) enacted without a par. (7).
8. establish a training program on source reduction opportunities, including workshops and guidance documents, for State and Federal permit issuance, enforcement, and inspection officials working within all agency program offices.
(FOOTNOTE 3)
(FOOTNOTE 3) So in original. The period probably should be a semicolon.
9. identify and make recommendations to Congress to eliminate barriers to source reduction including the use of incentives and disincentives;
10. identify opportunities to use Federal procurement to encourage source reduction;
11. develop, test and disseminate model source reduction auditing procedures designed to highlight source reduction opportunities; and
12. establish an annual award program to recognize a company or companies which operate outstanding or innovative source reduction programs.

§ 13104. Grants to States for State technical assistance programs

(a) General authority

The Administrator shall make matching grants to States for programs to promote the use of source reduction techniques by businesses.

(b) Criteria

When evaluating the requests for grants under this section, the Administrator shall consider, among other things, whether the proposed State program would accomplish the following:

1. Make specific technical assistance available to businesses seeking information about source reduction opportunities, including funding for experts to provide onsite technical advice to business (FOOTNOTE 1) seeking assistance and to assist in the development of source reduction plans.
   (FOOTNOTE 1) So in original. Probably should be "businesses".
2. Target assistance to businesses for whom lack of information is an impediment to source reduction.
3. Provide training in source reduction techniques. Such training may be provided through local engineering schools or any other appropriate means.

(c) Matching funds

Federal funds used in any State program under this section shall provide no more than 50 percent of the funds made available to a State in each year of that State's participation in the program.

(d) Effectiveness

The Administrator shall establish appropriate means for measuring the effectiveness of the State grants made under this section in promoting the use of source reduction techniques by businesses.

(e) Information

States receiving grants under this section shall make information generated under the grants available to the Administrator.
§ 13105. Source Reduction Clearinghouse

(a) Authority

The Administrator shall establish a Source Reduction Clearinghouse to compile information including a computer data base which contains information on management, technical, and operational approaches to source reduction. The Administrator shall use the clearinghouse to

1. serve as a center for source reduction technology transfer;
2. mount active outreach and education programs by the States to further the adoption of source reduction technologies; and
3. collect and compile information reported by States receiving grants under section 13104 of this title on the operation and success of State source reduction programs.

(b) Public availability

The Administrator shall make available to the public such information on source reduction as is gathered pursuant to this chapter and such other pertinent information and analysis regarding source reduction as may be available to the Administrator. The data base shall permit entry and retrieval of information to any person.

§ 13106. Source reduction and recycling data collection

(a) Reporting requirements

Each owner or operator of a facility required to file an annual toxic chemical release form under section 11023 of this title for any toxic chemical shall include with each such annual filing a toxic chemical source reduction and recycling report for the proceeding (FOOTNOTE 1) calendar year. The toxic chemical source reduction and recycling report shall cover each toxic chemical required to be reported in the annual toxic chemical release form filed by the owner or operator under section 11023(c) of this title. This section shall take effect with the annual report filed under section 11023 of this title for the first full calendar year beginning after November 5, 1990.

(FOOTNOTE 1) So in original. Probably should be "preceding".

(b) Items included in report

The toxic chemical source reduction and recycling report required under subsection (a) of this section shall set forth each of the following on a facility-by-facility basis for each toxic chemical:

1. The quantity of the chemical entering any waste stream (or otherwise released into the environment) prior to recycling, treatment, or disposal during the calendar year for which the report is filed and the percentage change from the previous year. The quantity reported shall not include any amount reported under paragraph (7). When actual measurements of the quantity of a toxic chemical
entering the waste streams are not readily available, reasonable estimates should be made based on best engineering judgment.

2. The amount of the chemical from the facility which is recycled (at the facility or elsewhere) during such calendar year, the percentage change from the previous year, and the process of recycling used.

3. The source reduction practices used with respect to that chemical during such year at the facility. Such practices shall be reported in accordance with the following categories unless the Administrator finds other categories to be more appropriate.

   (A) Equipment, technology, process, or procedure modifications.
   (B) Reformulation or redesign of products.
   (C) Substitution of raw materials.
   (D) Improvement in management, training, inventory control, materials handling, or other general operational phases of industrial facilities.

4. The amount expected to be reported under paragraph (FOOTNOTE 2) (1) and (2) for the two calendar years immediately following the calendar year for which the report is filed. Such amount shall be expressed as a percentage change from the amount reported in paragraphs (1) and (2).

(FOOTNOTE 2) So in original. Probably should be "paragraphs".

5. A ratio of production in the reporting year to production in the previous year. The ratio should be calculated to most closely reflect all activities involving the toxic chemical. In specific industrial classifications subject to this section, where a feedstock or some variable other than production is the primary influence on waste characteristics or volumes, the report may provide an index based on that primary variable for each toxic chemical. The Administrator is encouraged to develop production indexes to accommodate individual industries for use on a voluntary basis.

6. The techniques which were used to identify source reduction opportunities. Techniques listed should include, but are not limited to, employee recommendations, external and internal audits, participative team management, and material balance audits. Each type of source reduction listed under paragraph (3) should be associated with the techniques or multiples of techniques used to identify the source reduction technique.

7. The amount of any toxic chemical released into the environment which resulted from a catastrophic event, remedial action, or other one-time event, and is not associated with production processes during the reporting year.

8. The amount of the chemical from the facility which is treated (at the facility or elsewhere) during such calendar year and the percentage change from the previous year. For the first year of reporting under this subsection, comparison with the previous year is required only to the extent such information is available.

(c) SARA provisions

The provisions of sections 11042, 11045(c), and 11046 of this title shall apply to the reporting requirements of this section in the same manner as to the reports required under section >11023 of this title. The Administrator may modify the form required for purposes of reporting information under section 11023 of this title to the extent he deems necessary to include the additional information required under this section.
(d) Additional optional information

Any person filing a report under this section for any year may include with the report additional information regarding source reduction, recycling, and other pollution control techniques in earlier years.

(e) Availability of data

Subject to section 11042 of this title, the Administrator shall make data collected under this section publicly available in the same manner as the data collected under section 11023 of this title.

§ 13107. EPA report

(a) Biennial reports

The Administrator shall provide Congress with a report within eighteen months after November 5, 1990, and biennially thereafter, containing a detailed description of the actions taken to implement the strategy to promote source reduction developed under section 13103. (b) (FOOTNOTE 1) of this title and of the results of such actions. The report shall include an assessment of the effectiveness of the clearinghouse and grant program established under this chapter in promoting the goals of the strategy, and shall evaluate data gaps and data duplication with respect to data collected under Federal environmental statutes. (FOOTNOTE 1) See References in Text note below.

(b) Subsequent reports

Each biennial report submitted under subsection (a) of this section after the first report shall contain each of the following:

1. An analysis of the data collected under section 13106 of this title on an industry-by-industry basis for not less than five SIC codes or other categories as the Administrator deems appropriate. The analysis shall begin with those SIC codes or other categories of facilities which generate the largest quantities of toxic chemical waste. The analysis shall include an evaluation of trends in source reduction by industry, firm size, production, or other useful means. Each such subsequent report shall cover five SIC codes or other categories which were not covered in a prior report until all SIC codes or other categories have been covered.
2. An analysis of the usefulness and validity of the data collected under section 13106 of this title for measuring trends in source reduction and the adoption of source reduction by business. 3. Identification of regulatory and nonregulatory barriers to source reduction, and of opportunities for using existing regulatory programs, and incentives and disincentives to promote and assist source reduction.
4. Identification of industries and pollutants that require priority assistance in multimedia source reduction (FOOTNOTE 2) (FOOTNOTE 2) So in original. Probably should be followed by a period.
5. Recommendations as to incentives needed to encourage investment and research and development in source reduction.
6. Identification of opportunities and development of priorities for research and
development in source reduction methods and techniques.
7. An evaluation of the cost and technical feasibility, by industry and processes,
of source reduction opportunities and current activities and an identification of
any industries for which there are significant barriers to source reduction with an
analysis of the basis of this identification.
8. An evaluation of methods of coordinating, streamlining, and improving public
access to data collected under Federal environmental statutes.
9. An evaluation of data gaps and data duplication with respect to data collected
under Federal environmental statutes. In the report following the first biennial
report provided for under this subsection, paragraphs (3) through (9) may be
included at the discretion of the Administrator.

§ 13108. Savings provisions

(a) Nothing in this chapter shall be construed to modify or interfere with the implementation
of title III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001
et seq.).

(b) Nothing contained in this chapter shall be construed, interpreted or applied to supplant,
displace, preempt or otherwise diminish the responsibilities and liabilities under other State
or Federal law, whether statutory or common.

§ 13109. Authorization of appropriations

There is authorized to be appropriated to the Administrator $8,000,000 for each of the fiscal
years 1991, 1992, and 1993 for functions carried out under this chapter (other than State
Grants), (FOOTNOTE 1) and $8,000,000 for each of the fiscal years 1991, 1992, and 1993,
for grant programs to States issued pursuant to section 13104 of this title. (FOOTNOTE 1) So
in original. Probably should not be capitalized.

I. Background and Purpose of the Policy

The Clean Water Act (CWA)\(^1\) was enacted in 1972 to restore and maintain the chemical, physical, and biological integrity of the nation’s waters. It established a national policy that called for the discharge of pollutants to be eliminated and established interim goals for protecting fish, wildlife and recreational uses. The CWA also established a national policy for development and implementation of programs so the goals of the Act could be met through controls of point and nonpoint sources of pollution. Congress recognized and preserved the primary responsibilities and rights of the States to prevent, reduce and eliminate pollution.

The application of technology and water quality based requirements through the National Pollutant Discharge Elimination System (NPDES) permit program has achieved and remains critical to success in controlling point source pollution and restoring the nation’s waters. Despite these accomplishments approximately 40% of the rivers, 45% of the streams and 50% of the lakes that have been assessed still do not support their designated uses\(^2\). Sources of pollution such as urban storm water, agricultural runoff and atmospheric deposition continue to threaten our nation’s waters. Nutrient and sediment loading from agriculture and storm water are significant contributors to water quality problems such as hypoxia in the Gulf of Mexico and decreased fish populations in Chesapeake Bay. Population growth and development place increasing demands on the environment making it more difficult to achieve and maintain water quality standards.

Finding solutions to these complex water quality problems requires innovative approaches that are aligned with core water programs. Water quality trading is an approach that offers greater efficiency in achieving water quality goals on a watershed basis. It allows one source to meet its regulatory obligations by using pollutant reductions created by another source that has lower pollution control costs. Trading capitalizes on economies of scale and the control cost differentials among and between sources.

The United States Environmental Protection Agency (EPA) believes that market-based approaches such as water quality trading provide greater flexibility and have potential to achieve water quality and environmental benefits greater than would otherwise be achieved under more traditional regulatory approaches. Market-based programs can

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1 Federal Water Pollution Control Act (Public Law 92-500, as amended), 33 U.S.C. Sec. 1251, et seq.

2 About 33 percent of the nation’s waters have been assessed by States and tribes pursuant to Section 305(b) of the Clean Water Act (National Water Quality Inventory: 2000 Report, EPA). The proportion of non-assessed water that do not meet designated uses is likely lower since assessments tend to be focused in known problem areas.
achieve water quality goals at a substantial economic savings. EPA estimates that in 1997 annual private point source control costs were about $14 billion and public point source costs were about $34 billion\textsuperscript{3}. The National Cost to Implement Total Maximum Daily Loads (TMDLs) Draft Report estimates that flexible approaches to improving water quality could save $900 million dollars annually compared to the least flexible approach (EPA, August 2001). Nitrogen trading among publicly owned treatment works in Connecticut that discharge into Long Island Sound is expected to achieve the required reductions under a TMDL while saving over $200 million dollars in control costs. Market-based approaches can also create economic incentives for innovation, emerging technology, voluntary pollution reductions and greater efficiency in improving the quality of the nation’s waters.

The purpose of this policy is to encourage states, interstate agencies and tribes to develop and implement water quality trading programs for nutrients, sediments and other pollutants where opportunities exist to achieve water quality improvements at reduced costs. More specifically, the policy is intended to encourage voluntary trading programs that facilitate implementation of TMDLs, reduce the costs of compliance with CWA regulations, establish incentives for voluntary reductions and promote watershed-based initiatives. A number of states are in various stages of developing trading programs. This policy provides guidance for states, interstate agencies and tribes to assist them in developing and implementing such programs.

This policy addresses issues left open by and limitations encountered implementing projects and programs under EPA’s January 1996 Effluent Trading In Watersheds Policy and May 1996 Draft Framework for Watershed-Based Trading (“Draft Framework”). This policy should be given precedence over any inconsistencies with the Draft Framework.

This policy draws upon lessons from a number of recent pilot trading projects and state experiences in developing water quality trading programs. These initiatives demonstrate how trading can occur under the CWA and existing federal regulations. They illustrate the importance of voluntary watershed-based partnerships, inter-agency cooperation and public participation in implementation of trading programs. They show that flexible market-based approaches can facilitate states and tribes finding solutions to complex and diverse water quality and socioeconomic issues. These efforts have also highlighted the importance of keeping transaction and administrative costs manageable while retaining accountability. The lessons learned from these efforts have informed the development of this policy.

This policy describes various requirements of the CWA and implementing regulations that are relevant to water quality trading, including: requirements to obtain permits (Sections 402 and 404), antibacksliding provisions (Section 303(d)(4) and Section 402(o)), the development of water quality standards including antidegradation policy (Section 303(c)), federal NPDES permit regulations (40 CFR Parts 122, 123 and 124), TMDLs (Section 303d(1)) and water quality management plans (40 CFR Part 130).

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These CWA provisions and regulations contain legally binding requirements. This policy does not substitute for those provisions or requirements. In addition, this policy identifies general elements and provisions that EPA believes are important for creating credible water quality trading programs.

When EPA makes a decision with regard to any particular permit, TMDL, water quality standards or water quality management plan that includes provisions for trading to occur, it will make each decision on a case-by-case basis guided by the applicable requirements of the CWA and implementing regulations and the specific facts and circumstances involved.

II. Trading Objectives

EPA supports implementation of water quality trading by states, interstate agencies and tribes where trading:

A. Achieves early reductions and progress towards water quality standards pending development of TMDLs for impaired waters.

B. Reduces the cost of implementing TMDLs through greater efficiency and flexible approaches.

C. Establishes economic incentives for voluntary pollutant reductions from point and nonpoint sources within a watershed.

D. Reduces the cost of compliance with water quality-based requirements.

E. Offsets new or increased discharges resulting from growth in order to maintain levels of water quality that support all designated uses.

F. Achieves greater environmental benefits than those under existing regulatory programs. EPA supports the creation of water quality trading credits in ways that achieve ancillary environmental benefits beyond the required reductions in specific pollutant loads, such as the creation and restoration of wetlands, floodplains and wildlife and/or waterfowl habitat.

G. Secures long-term improvements in water quality through the purchase and retirement of credits by any entity.

H. Combines ecological services to achieve multiple environmental and economic benefits, such as wetland restoration or the implementation of management practices that improve water quality and habitat.
III. Water Quality Trading Policy Statement

A. CWA Requirements. Water quality trading and other market-based programs must be consistent with the CWA.

B. Trading Areas. All water quality trading should occur within a watershed or a defined area for which a TMDL has been approved. Establishing defined trading areas that coincide with a watershed or TMDL boundary results in trades that affect the same water body or stream segment and helps ensure that water quality standards are maintained or achieved throughout the trading area and contiguous waters.

C. Pollutants and Parameters Traded. EPA supports trading that involves nutrients (e.g., total phosphorus and total nitrogen) or sediment loads. In addition, EPA recognizes that trading of pollutants other than nutrients and sediments has the potential to improve water quality and achieve ancillary environmental benefits if trades and trading programs are properly designed. EPA believes that such trades may pose a higher level of risk and should receive a higher level of scrutiny to ensure that they are consistent with water quality standards. EPA may support trades that involve pollutants other than nutrients and sediments on a case-by-case basis where prior approval is provided through an NPDES permit, a TMDL or in the context of a watershed plan or pilot trading project that is supported by a state, tribe or EPA.

EPA also supports cross-pollutant trading for oxygen-related pollutants where adequate information exists to establish and correlate impacts on water quality. Reducing upstream nutrient levels to offset a downstream biochemical oxygen demand or to improve a depressed in-stream dissolved oxygen level are examples of cross-pollutant trading.

EPA does not currently support trading of pollutants considered by EPA to be persistent bioaccumulative toxics (PBTs). EPA would consider a limited number of pilot projects over the next two to three years to obtain more information regarding trading of PBTs. EPA believes pilot projects may be appropriate where the predominant loads do not come from point sources, trading achieves a substantial reduction of the PBT traded and where trading does not cause an exceedance of an aquatic life or human health criterion. Based on the findings of these pilot projects, EPA will consider making revisions to its policy.

Where state or tribal water quality standards allow for mixing zones, EPA does not support any trading activity that would exceed an acute aquatic life criteria within a mixing zone or a chronic aquatic life or human health criteria at the edge of a mixing zone using design flows specified in the water quality standards.

D. Baselines for Water Quality Trading. As explained below, the baselines for generating pollution reduction credits should be derived from and consistent with
Water Quality Trading Policy Statement

water quality standards. The term pollution reduction credits ("credits"), as used in this policy, means pollutant reductions greater than those required by a regulatory requirement or established under a TMDL.

For example, where a TMDL has been approved or established by EPA, the applicable point source waste load allocation or nonpoint source load allocation would establish the baselines for generating credits. For trades that occur where water quality fully supports designated uses, or in impaired waters prior to a TMDL being established, the baseline for point sources should be established by the applicable water quality based effluent limitation, a quantified performance requirement or a management practice derived from water quality standards. In these scenarios the baseline for nonpoint sources should be the level of pollutant load associated with existing land uses and management practices that comply with applicable state, local or tribal regulations.

E. When Trading May Occur.

1. Trading to Maintain Water Quality Standards. Trading may be used to maintain high water quality in waters where water quality standards are attained, such as by compensating for new or increased discharges of pollutants.

2. Pre-TMDL Trading In Impaired Waters. EPA supports pre-TMDL trading in impaired waters to achieve progress towards or the attainment of water quality standards. EPA believes this may be accomplished by individual trades that achieve a net reduction of the pollutant traded or by watershed-scale trading programs that reduce loadings to a specified cap supported by baseline information on pollutant sources and loadings.

EPA also supports pre-TMDL trading that achieves a direct environmental benefit relevant to the conditions or causes of impairment to achieve progress towards restoring designated uses where reducing pollutant loads alone is not sufficient or as cost-effective.

If pre-TMDL trading does not result in the attainment of applicable water quality standards, EPA expects a TMDL to be developed. After a TMDL has been approved or established by EPA, the reductions made to generate credits for pre-TMDL trading may no longer be adequate to generate credits under the TMDL. This will depend on the remaining level of reduction needed to achieve water quality standards and, where applicable, the allocation of point and nonpoint source pollutant loads established by the TMDL.

3. TMDL Trading. Trades and trading programs in impaired waters for which a TMDL has been approved or established by EPA should be consistent with the assumptions and requirements upon which the TMDL is established. EPA encourages the inclusion of specific trading provisions in the TMDL itself, in NPDES permits, in watershed plans and the continuing planning process.
USEPA

Office of Water

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EPA does not support any trading activity that would delay implementation of a TMDL approved or established by EPA or that would cause the combined point source and nonpoint source loadings to exceed the cap established by a TMDL.

4. Technology-Based Trading. EPA does not support trading to comply with existing technology-based effluent limitations except as expressly authorized by federal regulations. Existing technology-based effluent guidelines for the iron and steel industry allow intraplant trading of conventional, nonconventional and toxic pollutants between outfalls under certain circumstances (40 CFR 420.03).

EPA will consider including provisions for trading in the development of new and revised technology-based effluent guidelines and other regulations to achieve technology-based requirements, reduce implementation costs and increase environmental benefits.

5. Pretreatment Trading. EPA supports a municipality or regional sewerage authority developing and implementing trading programs among industrial users that are consistent with the pretreatment regulatory requirements at 40 CFR Part 403 and the municipality’s or authority’s NPDES permit.

6. Intra-Plant Trading. EPA supports intra-plant trading that involves the generation and use of credits between multiple outfalls that discharge to the same receiving water from a single facility that has been issued an NPDES permit.

F. Alignment With The CWA. Provisions for water quality trading should be aligned with and incorporated into core water quality programs. EPA believes this may be done by including provisions for trading in water quality management plans, the continuing planning process, watershed plans, water quality standards, including antidegradation policy and, by incorporating provisions for trading into TMDLs and NPDES permits.

When developing water quality trades and trading programs, states and tribes should, at a minimum, take into account the following provisions of the CWA and implementing regulations:

1. Requirements to Obtain Permits. Sources and activities that are required to obtain a federal permit pursuant to Sections 402 or 404 of the CWA must do so to participate in a trade or trading program.

2. Incorporating Provisions For Trading Into Permits. In some cases, specific trades may be identified in NPDES permits, including requirements related to the control of nonpoint sources where appropriate. EPA also supports several flexible approaches for incorporating provisions for trading into NPDES permits: i) general conditions in a permit that authorize trading and describe appropriate conditions and restrictions for trading to occur, ii) the use of variable permit limits that may be adjusted up or down based on the quantity of credits generated or
used; and/or, iii) the use of alternate permit limits or conditions that establish restrictions on the amount of a point source’s pollution reduction obligation that may be achieved by the use of credits if trading occurs. EPA also encourages the use of watershed general permits, where appropriate, to establish pollutant-specific limitations for a group of sources in the same or similar categories to achieve net pollutant reductions or water quality goals through trading. Watershed permits issued to point sources should include facility specific effluent limitations or other conditions that would apply in the event the pollutant cap established by the watershed permit is exceeded.

3. Public Notice, Comment and Opportunity For Hearing. Notice, comment and opportunity for hearing must be provided for all NPDES permits (40 CFR 124). NPDES permits and fact sheets should describe how baselines and conditions or limits for trading have been established and how they are consistent with water quality standards. EPA does not expect that an NPDES permit would need to be modified to incorporate an individual trade if that permit contains authorization and provisions for trading to occur and the public was given notice and an opportunity to comment and/or attend a public hearing at the time the permit was issued.

4. Consistency With Standard Methods. Where methods and procedures (e.g., sampling protocols, monitoring frequencies) are specified by federal regulations or in NPDES permits, they should continue to be used where applicable for measuring compliance for point sources that engage in trading. EPA believes this is necessary to provide clear and consistent standards for measuring compliance and to ensure that appropriate enforcement action can be taken.

5. Protecting Designated Uses. EPA does not support any use of credits or trading activity that would cause an impairment of existing or designated uses, adversely affect water quality at an intake for drinking water supply or that would exceed a cap established under a TMDL.

6. Antibacksliding. EPA believes that the antibacksliding provisions of Section 303(d)(4) of the CWA will generally be satisfied where a point source increases its discharge through the use of credits in accordance with alternate or variable water quality based effluent limitations contained in an NPDES permit, in a manner consistent with provisions for trading under a TMDL, or consistent with the provisions for pre-TMDL trading included in a watershed plan.

These antibacksliding provisions will also generally be satisfied where a point source generates pollution reduction credits by reducing its discharge below a water quality based effluent limitation (WQBEL) that implements a TMDL or is otherwise established to meet water quality standards and it later decides to discontinue generating credits, provided that the total pollutant load to the
receiving water is not increased, or is otherwise consistent with state or tribal antidegradation policy.

7. Antidegradation. Trading should be consistent with applicable water quality standards, including a state’s and tribe’s antidegradation policy established to maintain and protect existing instream water uses and the level of water quality necessary to support them, as well as high quality waters and outstanding national resource waters (40 CFR 131.12). EPA recommends that state or tribal antidegradation policies include provisions for trading to occur without requiring antidegradation review for high quality waters. EPA does not believe that trades and trading programs will result in “lower water quality” as that term is used in 40 CFR 131.12(a)(2), or that antidegradation review would be required under EPA’s regulations when the trades or trading programs achieve a no net increase of the pollutant traded and do not result in any impairment of designated uses.

G. Common Elements of Credible Trading Programs. EPA believes that, in addition to including provisions to be consistent with the CWA, trading programs should include the following general elements to be credible and successful:

1. Legal Authority and Mechanisms. Clear legal authority and mechanisms are necessary for trading to occur. EPA believes the CWA provides authority for EPA, states and tribes to develop a variety of programs and activities to control pollution, including trading programs. The CWA and federal regulations provide authority to incorporate provisions for trading into NPDES permits issued to point sources and for trading under TMDLs that include provisions for trading to occur. In addition, states and tribes should use specific legal mechanisms to facilitate trading. Provisions for trading may be established through various mechanisms, including: legislation, rule making, incorporating provisions for trading into NPDES permits and establishing provisions for trading in TMDLs or watershed plans. These provisions may incorporate or be supplemented by private contracts between sources or third-party contracts where the third party provides an indemnification or enforcement function.

2. Units of Trade. Clearly defined units of trade are necessary for trading to occur. Pollutant specific credits are examples of tradable units for water quality trading. These may be expressed in rates or mass per unit time as appropriate to be consistent with the time periods that are used to determine compliance with NPDES permit limitations or other regulatory requirements.

3. Creation and Duration of Credits. Credits should be generated before or during the same period they are used to comply with a monthly, seasonal or annual limitation or requirement specified in an NPDES permit. Credits may be generated as long as the pollution controls or management practices are functioning as expected.
4. Quantifying Credits and Addressing Uncertainty. Standardized protocols are necessary to quantify pollutant loads, load reductions, and credits. States and tribes should develop procedures to account for the generation and use of credits in NPDES permits and discharge monitoring reports in order to track the generation and use of credits between sources and assess compliance.

Where trading involves nonpoint sources, states and tribes should adopt methods to account for the greater uncertainty in estimates of nonpoint source loads and reductions. Greater uncertainty in nonpoint source estimates is due to several factors including but not limited to variability in precipitation, variable performance of land management practices, time lag between implementation of some practices and full performance, and the effect of soils, cover and slope on pollutant load delivery to receiving waters.

EPA supports a number of approaches to compensate for nonpoint source uncertainty. These include monitoring to verify load reductions, the use of greater than 1:1 trading ratios between nonpoint and point sources, using demonstrated performance values or conservative assumptions in estimating the effectiveness of nonpoint source management practices, using site- or trade-specific discount factors, and retiring a percentage of nonpoint source reductions for each transaction or a predetermined number of credits. Where appropriate, states and tribes may elect to establish a reserve pool of credits that would be available to compensate for unanticipated shortfalls in the quantity of credits that are actually generated.

The site-specific procedures and protocols used in water quality trading programs that involve agriculture and forestry operations should be developed by states and tribes in consultation with United States Department of Agriculture (USDA) agencies. Those procedures should estimate nutrient or sediment load delivery to the stream segment, water body or watershed where trading occurs. Numerous methods and procedures to determine nutrient and sediment load reductions associated with conservation practices on agricultural and forest land have been developed or used by the USDA agencies, including the Natural Resources Conservation Service, Forest Service, Agricultural Research Service and the Cooperative State, Research, Education and Extension Service. Some of these methods may be applied to water quality trading.

As an example, the Revised Universal Soil Loss Equation (RUSLE) may be used in some locations to estimate the sediment yield at the end of a slope in agricultural settings. The sediment yield at the end of a slope coupled with an appropriate method to estimate sediment delivery to the receiving waters can provide a reasonable estimate of sediment load and load reductions. Representative soil sampling to determine the phosphorus content of soils can be used with this approach to estimate non-soluble sediment-bound phosphorus loads and load reductions. Different methods are appropriate to estimate soluble phosphorus and nitrogen loads and load reductions.
EPA and the USDA are working with other agencies to evaluate existing methods and to develop improved methods and procedures for estimating loads from agricultural and forestry lands. More precise estimations will be possible as technologies improve and new technologies are developed.

For storm water runoff other than agriculture, EPA recommends monitoring or modeling to estimate pollutant loads and load reductions. EPA believes this may be based on local hydrology and actual data or pollutant loading factors that relate land use patterns, percent imperviousness or percent disturbed land and controls or management practices in a watershed to per acre or per unit pollutant loads, where other methods are not specified in a permit or regulation.

5. Compliance and Enforcement Provisions. Mechanisms for determining and ensuring compliance are essential for all trades and trading programs. These may include a combination of record keeping, monitoring, reporting and inspections. Compliance audits should be conducted frequently enough to ensure that a high level of compliance is maintained across the program. States and tribes should establish clear enforceable mechanisms consistent with NPDES regulations that ensure legal accountability for the generation of credits that are traded. In the event of default by another source generating credits, an NPDES permittee using those credits is responsible for complying with the effluent limitations that would apply if the trade had not occurred. EPA also recommends that states and tribes consider providing periodic accounting and reconciliation periods and establishing appropriate enforcement provisions for failure to generate the quantity of credits that are traded.

EPA recommends that states and tribes consider the role of compliance history in determining source eligibility to participate in trading.

EPA recommends that states and tribes consider including provisions to address situations where nonpoint source controls and management practices that are implemented to generate credits fail due to extreme weather conditions or other circumstances that are beyond the control of the source.

6. Public Participation And Access To Information. EPA supports public participation at the earliest stages and throughout the development of water quality trading programs to strengthen program effectiveness and credibility.

Easy and timely public access to information is necessary for markets to function efficiently and for the public to monitor trading activity. EPA encourages states and tribes to make electronically available to the public information on the sources that trade, the quantity of credits generated and used on a watershed basis, market prices where available, and delineations of watershed and trading boundaries. This information is necessary to identify potential trading
opportunities, allow easy aggregation of credits, reduce transaction costs and establish public credibility.

7. Program Evaluations. Periodic assessments of environmental and economic effectiveness should be conducted and program revisions made as needed. Environmental evaluations should include ambient monitoring to ensure impairments of designated uses (including existing uses) do not occur and to document water quality conditions. Studies should be performed to quantify nonpoint source load reductions, validate nonpoint source pollutant removal efficiencies and determine whether the anticipated water quality objectives have been achieved. Economic evaluations should include the number and type of trades, the price paid for pollutant reduction credits, transaction costs, the costs incurred to administer the program, and where possible any net cost savings resulting from trading.

The results of program evaluations should be made available to the public. An opportunity for comment should also be provided on changes to the program as necessary to ensure that water quality objectives and economic efficiencies are achieved, and that trading does not result in an impairment of designated uses (including existing uses).

H. EPA’s Oversight Role. States and tribes are encouraged to consult with EPA throughout development of trading programs to facilitate alignment with the CWA. EPA has various oversight responsibilities under the CWA, including approval or establishment of TMDLs, approval of revisions to state or tribal water quality standards, review of NPDES permits and provisions for reviewing and making recommendations regarding revisions to a state’s or tribe’s water quality management plans through the continuing planning process. In general, EPA does not believe that the development and implementation by states and tribes of trading programs consistent with the provisions of this policy necessarily warrant a higher level of scrutiny under these oversight authorities than is appropriate for activities not involving trading. However, where questions or concerns arise, EPA will use its oversight authorities to ensure that trades and trading programs are fully consistent with the CWA and its implementing regulations.
conveyances owned by a State, municipality, or other party not leading to treatment works.

(d) Any discharge in compliance with the instructions of an On-Scene Coordinator pursuant to 40 CFR part 300 (The National Oil and Hazardous Substances Pollution Contingency Plan) or 33 CFR 153.10(e) (Pollution by Oil and Hazardous Substances).

(e) Any introduction of pollutants from non point-source agricultural and silvicultural activities, including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands, but not discharges from concentrated animal feeding operations as defined in §122.23, discharges from concentrated aquatic animal production facilities as defined in §122.24, discharges to aquaculture projects as defined in §122.25, and discharges from silvicultural point sources as defined in §122.27.

(f) Return flows from irrigated agriculture.

(g) Discharges into a privately owned treatment works, except as the Director may otherwise require under §122.44(m).

(h) The application of pesticides consistent with all relevant requirements under FIFRA (i.e., those relevant to protecting water quality), in the following two circumstances:

(1) The application of pesticides directly to waters of the United States in order to control pests. Examples of such applications include applications to control mosquito larvae, aquatic weeds, or other pests that are present in waters of the United States.

(2) The application of pesticides to control pests that are present over waters of the United States, including near such waters, where a portion of the pesticides will unavoidably be deposited to waters of the United States in order to target the pests effectively; for example, when insecticides are aerially applied to a forest canopy where waters of the United States may be present below the canopy or when pesticides are applied over or near water for control of adult mosquitoes or other pests.

(i) Discharges from a water transfer. Water transfer means an activity that conveys or connects waters of the United States without subjecting the transferred water to intervening industrial, municipal, or commercial use. This exclusion does not apply to pollutants introduced by the water transfer activity itself to the water being transferred.

\[48 \text{ FR 14153, Apr. 1, 1983, as amended at 54 FR 254, 258, Jan. 4, 1989; 71 FR 68692, Nov. 27, 2006; 73 \text{ FR 33708, June 13, 2008}}\]

§122.4 Prohibitions (applicable to State NPDES programs, see §123.25).

No permit may be issued:

(a) When the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA;

(b) When the applicant is required to obtain a State or other appropriate certification under section 401 of CWA and §124.53 and that certification has not been obtained or waived;

(c) By the State Director where the Regional Administrator has objected to issuance of the permit under §123.44;

(d) When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States;

(e) When, in the judgment of the Secretary, anchorage and navigation in or on any of the waters of the United States would be substantially impaired by the discharge;

(f) For the discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste;

(g) For any discharge inconsistent with a plan or plan amendment approved under section 208(b) of CWA;

(h) For any discharge to the territorial sea, the waters of the contiguous zone, or the oceans in the following circumstances:

(1) Before the promulgation of guidelines under section 403(c) of CWA (for determining degradation of the waters of the territorial seas, the contiguous zone, and the oceans) unless the Director determines permit issuance to be in the public interest; or

(2) After promulgation of guidelines under section 403(c) of CWA, when insufficient information exists to make a reasonable judgment whether the discharge complies with them.

\[167\]
§ 122.5 Effect of a permit.

(a) Applicable to State programs, see §122.25. (1) Except for any toxic effluent standards and prohibitions imposed under section 307 of the CWA and “standards for sewage sludge use or disposal” under 405(d) of the CWA, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with sections 301, 302, 306, 307, 318, 403, and 405 (a)-(b) of CWA. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in §§122.62 and 122.64.

(b) Applicable to State programs, See §122.25. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.

(c) The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.


§ 122.6 Continuation of expiring permits.

(a) EPA permits. When EPA is the permit-issuing authority, the conditions of an expired permit continue in force under 5 U.S.C. 558(c) until the effective date of a new permit (see §124.15) if:

(1) The permittee has submitted a timely application under §122.21 which is a complete (under §122.21(e)) application for a new permit; and

(2) The Regional Administrator, through no fault of the permittee does not issue a new permit with an effective date under §124.15 on or before the expiration date of the previous permit (for example, when issuance is impracticable due to time or resource constraints).

(b) Effect. Permits continued under this section remain fully effective and enforceable.

(c) Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit the Regional Administrator may choose to do any or all of the following:

(1) Initiate enforcement action based upon the permit which has been continued;

(2) Issue a notice of intent to deny the new permit under §124.6. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

(3) Issue a new permit under part 124 with appropriate conditions; or

(4) Take other actions authorized by these regulations.
731 N.W.2d 502 (2007)

In the Matter of the CITIES OF ANNANDALE AND MAPLE LAKE NPDES/SDS PERMIT ISSUANCE FOR THE DISCHARGE OF TREATED WASTEWATER, and Request for Contested Case Hearing.

No. A04-2033.

Supreme Court of Minnesota.


OPINION

ANDERSON, PAUL H., Justice.

This appeal results from the issuance of a National Pollutant Discharge Elimination System (NPDES) permit by the Minnesota Pollution Control Agency (MPCA) for a wastewater treatment plant jointly proposed by the City of Annandale and the City of Maple Lake (the Cities). The MPCA found that the proposed plant, when operating at capacity, would increase phosphorus discharge to the North Fork of the Crow River by approximately 2,200 pounds per year over that which is discharged by the Cities' existing facilities, but the MPCA concluded that, under 40 C.F.R. § 122.4(i) (2006), this increase would not contribute to the violation of water quality standards in the Lake Pepin watershed. The MPCA reached this conclusion and issued a permit on the basis that the increased discharge would be offset by an approximate 53,500-pound annual reduction in phosphorus discharge due to an upgrade of a wastewater treatment plant in nearby Litchfield.

A divided Minnesota Court of Appeals reversed the MPCA, concluding that the phosphorus discharge from the proposed facility would violate water quality standards, and therefore issuing a permit violated 40 C.F.R. § 122.4(i). The Cities and the MPCA petitioned for review of the following issues: (1) whether a state agency's interpretation of a federal regulation that the agency is charged with enforcing and administering is entitled to deference by the courts; and (2) whether the MPCA may consider offsets from another source in determining whether a discharge causes or contributes to the violation of water quality standards under 40 C.F.R. § 122.4(i). We reverse.

The cities of Annandale and Maple Lake (the Cities) are located in Wright County, Minnesota, approximately 125 miles northwest of Lake Pepin. Annandale and Maple Lake experienced population increases of 27 percent and 44 percent respectively between 1980 and 2000. Wright County as a whole is projecting a 54 percent population increase between 2000 and 2030.
Maple Lake currently utilizes a mechanical plant for its wastewater treatment, which plant is nearing capacity. The plant discharges approximately 1,400 pounds of phosphorus annually, into Mud Lake, which flows into the North Fork of the Crow River (North Fork), then into the Mississippi River, and ultimately into Lake Pepin. Lake Pepin is a naturally-occurring lake on the Mississippi River and has been identified by the Minnesota Pollution Control Agency (MPCA)\(^1\) as impaired under the Clean Water Act. See 33 U.S.C. §§ 1251-1387 (2000). For its wastewater treatment, Annandale utilizes a pond system with spray irrigation; this system does not discharge into the North Fork or any other surface water. The existing Annandale facility is operating at capacity. The Cities' current wastewater treatment facilities are both over 40 years old. Annandale's last National Pollutant Discharge *507 Elimination System (NPDES) permit expired on March 31, 2004. Maple Lake's last NPDES permit expired on August 31, 2005.

In late 2002, the Cities jointly developed plans for a new wastewater treatment plant. In 2003, the Cities applied to the MPCA for an NPDES permit for a single joint plant that would discharge into an unnamed tributary of the North Fork. Based on a condition imposed by the Wright County Planning Commission, which required discharge directly to the North Fork rather than the unnamed tributary, the Cities submitted an amendment to their permit application in March 2004.

The MPCA placed a draft proposed permit "on public notice" on May 10, 2004, and held a public hearing on May 27, 2004. The draft permit placed specific limits on the proposed plant's discharge, including a maximum concentration level of 1 mg/L for phosphorus and a minimum level of 6 mg/L for dissolved oxygen, as well as limits on carbonaceous biochemical oxygen demand, ammonia nitrogen, mercury, fecal coliform, pH, and suspended solids. With these limits in place, the proposed plant would discharge 3,600 pounds of phosphorus annually when it reached capacity by the year 2024. The MPCA received comments from respondent Minnesota Center for Environmental Advocacy (MCEA) and others, and responded in writing to the comments. On September 28, 2004, the MPCA held a meeting at which MPCA staff members, MCEA representatives, and members of the public discussed the draft proposed permit and the MPCA's proposed findings of fact, conclusions of law, and order.

One focus of the discussion at the MPCA meeting was the MCEA's concern that issuance of the NPDES permit would violate 40 C.F.R. § 122.4(i), which provides in part that a state may not issue an NPDES permit "[t]o a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards." The MCEA asserted that the proposed plant's increase of phosphorus discharge would necessarily cause or contribute to the violation of water quality standards in Lake Pepin. The MCEA also expressed concern that the discharge from the proposed plant would negatively affect dissolved oxygen levels in the North Fork in violation of water quality standards.\(^2\)

The MPCA recommended approval of the draft NPDES permit and issued findings, including a finding that, when operated at capacity, the proposed plant would increase phosphorus discharge to the North Fork by approximately 2,200 pounds annually over that which is discharged by Maple Lake's existing plant. But the MPCA found that this increase in phosphorus discharge would be offset by an approximate 53,500-pound reduction in phosphorus discharge to the North Fork due to upgrades to the Litchfield wastewater treatment plant. Accordingly, the MPCA concluded that "[b]ecause of the net reduction in the watershed, the proposed joint Annandale/Maple Lake facility will not contribute to water quality standards violations in Lake Pepin."

Additionally, the MPCA concluded that the dissolved oxygen effect from the proposed plant would not contribute to the *508 violation of water quality standards in the North Fork. The MPCA reached this conclusion because the section of the North Fork that is impaired for dissolved oxygen is 17.9 miles downstream from the discharge point of the proposed plant and the impairment to dissolved oxygen in a shallow river is greatest one to three miles downstream from a discharge point. On September 30, 2004, the MPCA issued the NPDES permit to the Cities.

By writ of certiorari to the court of appeals, the MCEA challenged the MPCA's decision to issue the NPDES permit. The MCEA argued to the court of appeals that (1) no deference should be given to the MPCA's interpretation of 40 C.F.R. § 122.4(i); (2) 40 C.F.R. § 122.4(i) prohibits the issuance of a NPDES permit before a total maximum daily load (TMDL)\[3\] is established; (3) the MPCA's conclusion that the proposed plant would not contribute to violation of water quality standards in Lake Pepin was erroneous; and (4) the MPCA's finding that increased carbonaceous biochemical oxygen demand and phosphorus from the proposed plant would not contribute to the North Fork's dissolved oxygen impairment is not supported by substantial evidence.

A divided court of appeals reversed in a published opinion. In re Cities of Annandale & Maple Lake NPDES/SDS Permit Issuance (Cities of Annandale & Maple Lake), 702 N.W.2d 768, 770 (Minn.App. 2005). The court concluded that no deference is given to a state agency's interpretation of a federal regulation because the interpretation of a federal regulation is a question of law that is reviewed de novo. Id. at 771. The court then rejected the MCEA's argument that 40 C.F.R. § 122.4(i) precludes issuance of an NPDES permit before a TMDL is completed, concluding that the absence of a TMDL does not necessarily prevent the issuance of a permit even though a TMDL has not been established.\[4\] 702 N.W.2d at 773. The court further concluded that the MPCA "was not barred as a matter of law from issuing a permit because of the impact of the Cities' proposed plant on dissolved-oxygen levels in the North Fork." Id. at 773-74. But the court of appeals held that "[b]ecause the discharge from the Cities' proposed plant would contribute to the impairment of Section 303(d) waters," the MPCA "erred by issuing a permit in violation of 40 C.F.R. § 122.4(i)." 702 N.W.2d at 776. In reaching its holding, the court apparently used "the impairment of Section 303(d) waters" interchangeably with "violation of water quality standards." It also appears that the court concluded that the proposed 2,200-pound increase in phosphorus discharge over what is currently discharged by the Maple Lake plant would necessarily "contribute to the impairment of" impaired waters, regardless of significant reductions in phosphorus discharge elsewhere in the watershed.\[5\]

*509 The court of appeals' dissent concluded that "when reviewed with the deference properly accorded agency actions on review by this court, the [M]PCA's interpretation of the regulation and its decision to grant the permit were reasonable and consistent with the purposes and principles of the [Clean Water Act]." 702 N.W.2d at 776 (Schumacher, J., dissenting). The dissent concluded that "judicial deference, rooted in the separation of powers doctrine, is extended to an agency decision-maker in the interpretation of statutes that the agency is charged with administering and enforcing." Id. at 777 (citations omitted). The dissent further concluded that a "reasonableness" standard should be applied by a court reviewing the MPCA's decision to issue an NPDES permit, and that the MPCA's decision was reasonable and should have been affirmed. Id. at 777-79.

None of the parties sought review of the dissolved oxygen issue; but, in the context of the phosphorous discharge, the Cities and the MPCA sought review of the court of appeals' rulings on (1) whether a state agency's interpretation of a federal regulation that the agency is charged with enforcing and administering is entitled to deference by the courts, and (2) whether the MPCA may consider offsets from other sources in determining whether a new discharge causes or contributes to
the violation of water quality standards under 40 C.F.R. § 122.4(i). Additionally, the Metropolitan Council, Trout Unlimited, Minnesota Lakes Association, Environmental Law and Policy Center of the Midwest, Natural Resources Defense Council, Midwest Environmental Advocates, American Rivers, Clean Up the River Environment, Coalition for a Clean Minnesota River, New Ulm Area Sportsfishermen, Friends of the Minnesota Valley, Builders Association of the Twin Cities, Coalition of Greater Minnesota Cities, Minnesota Environmental Science & Economic Review Board, National Association of Clean Water Agencies, League of Minnesota Cities, and Wright County Mayors Association requested leave to participate as amici curiae. We granted both petitions for review and all 17 amicus requests.

I.

Before specifically addressing the two issues raised by the parties, a general overview of the Clean Water Act (CWA) as applicable to the facts of this case is helpful. The CWA is the cornerstone of surface water protection in the United States. Its purpose "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a) (2000).

It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this chapter.


The CWA provides for two types of water quality measures: "effluent limitations" and "water quality standards." Arkansas v. Oklahoma, 503 U.S. 91, 101, 112 S.Ct. 1046, 117 L.Ed.2d 239 (1992). Effluent limitations promulgated by the Environmental Protection Agency (EPA) "restrict the quantities, rates, and concentrations *510 of specified substances which are discharged from point sources." Id. Under state and federal law, the MPCA is the Minnesota state agency charged with enforcing and administering the CWA and its attendant regulations. Minn.Stat. § 115.03, subds. 1, 5 (2006); 40 C.F.R. § 123.25(a) (2006). The regulation subject to interpretation by the MPCA in this case is 40 C.F.R. 122.4(i), which is a regulation promulgated by the EPA under the CWA.

Water quality standards, which are promulgated by the states, generally establish the desired condition of a body of water. The CWA requires states to establish water quality standards sufficient to "protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter." 33 U.S.C. § 1313(c)(2)(A) (2000). A state's water quality standards must be established "taking into consideration [each body of water's] use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation." Id. Water quality standards are "aimed at translating the broad goals of the CWA into waterbody-specific objectives." U.S. Envtl. Prot. Agency, Introduction to the Clean Water Act, http://www.epa.gov/watertrain/cwa/cwa2. htm (last visited Apr. 27, 2007).

None of the parties in this case specifically identifies the relevant water quality standards, but it appears that if a body of water is identified as impaired under section 303(d) of the CWA, it is necessarily in violation of one or more of the relevant water quality standards. See 33 U.S.C. § 1313 (d)(1)(A) (codifying CWA § 303(d) and stating: "Each State shall identify [as impaired] those waters
within its boundaries for which the effluent limitations * * * are not stringent enough to implement any water quality standard applicable to such waters."). In 2002 the MPCA listed Lake Pepin as impaired under section 303(d) because of excessive phosphorus levels.[6] Minn. Pollution Control Agency, MPCA 2002 303(d) List (Jan. 22, 2003), available at http://www.pca.state.mn.us/publications/reports/tmdl-2002list.pdf. Additionally, the MPCA has recently identified one section of the North Fork as impaired because of insufficient dissolved oxygen levels. Minn. Pollution Control Agency, 2006 Final TMDL List, available at http://www.pca.state.mn.us/publications/ wq-iw1-03.xls (last visited Apr. 27, 2007) Accordingly, it appears that the MPCA has determined that Lake Pepin is presently in violation of water quality standards for phosphorus and one section of the North Fork is presently in violation of water quality standards for dissolved oxygen.

In addition to requiring states to identify impaired waters, section 303(d) of the CWA also mandates that states establish a TMDL for each pollutant that causes a body of water to fail to meet water quality standards. 33 U.S.C. § 1313(d)(1)(C) (2000). As previously noted, a TMDL is the sum of pollutants a body of water can absorb from all point and nonpoint sources, plus a margin of safety, and still meet water quality standards for its designated uses. The MPCA has not established *511 TMDLs for Lake Pepin or the North Fork. The MPCA estimates that the TMDLs will not be established before late 2008 for Lake Pepin and 2012 for the North Fork.

If a TMDL has been established for a body of water identified as impaired under section 303(d), an NPDES permit may not be issued unless the permitting authority finds that the new source or discharge will not cause or contribute to the violation of water quality standards and will not violate the TMDL. See 40 C.F.R. § 122.4(i). MCEA argues that a plain reading of 40 C.F.R. § 122.4(i) indicates that the MPCA may not issue any NPDES permits before a TMDL is established. The court of appeals rejected this argument, concluding that:

When a TMDL has not been established, a new source is not required to demonstrate compliance with the TMDL. Rather, the opening sentence of 40 C.F.R. § 122.4(i) provides that a permit may be issued provided that the new source does not "cause or contribute to the violation of water quality standards." The remainder of section 122.4(i) addresses the criteria for issuing a permit when a TMDL has been established.

_Cities of Annandale & Maple Lake, 702 N.W.2d at 773._ No party sought review of the court's ruling that an NPDES permit may be issued before establishment of a TMDL, and we conclude that it is neither necessary nor prudent for us to address this issue at this time.

With the foregoing general background on the CWA, we now address the first issue raised by the parties whether a state agency's interpretation of a federal regulation that the agency is charged with enforcing and administering is entitled to deference by the courts. The MCEA argues that no deference should be given to the MPCA's decision on how to interpret 40 C.F.R. § 122.4(i). The MCEA also asserts that the MPCA's issuance of the NPDES permit was "affected by error of law," see Minn.Stat. § 14.69(d) (2006),[7] because the permit was issued "contrary to the plain language of federal regulation" and, therefore, this appeal presents a question of law that is to be reviewed de novo.

The court of appeals' majority apparently agreed with the MCEA's argument that the MPCA's decision to grant the permit was affected by an error of law, and did not give deference to the MPCA's interpretation of 40 C.F.R. 122.4(i). See _Cities of Annandale & Maple Lake, 702 N.W.2d at 772._ More particularly, the court of appeals noted that "[t]he decision of an agency is presumed to be correct, and we ordinarily accord deference to an agency in its field of expertise." _Id._ at 771 (citing _Reserve
Mining Co. v. Herbst, 256 N.W.2d 808, 824 (Minn.1977)). But the court went on to conclude that "[b]ecause the interpretation of a federal regulation is a question of law, we need not defer to a state agency's interpretation." Id. In essence, the court held that because the MPCA was interpreting a federal regulation—not a regulation promulgated by the MPCA—the MPCA's interpretation is not entitled to deference by the courts. We disagree with this result because the court of appeals has too narrowly construed the deference courts are to give to a state agency's interpretation of a regulation that the agency is charged with enforcing and administering.

While we have been asked on several occasions to determine whether and how much deference courts should give to administrative agency interpretations of regulations, *512 we have not yet addressed the precise question presented here—whether courts should defer to a state agency's interpretation of a federal regulation when the state agency is charged with enforcing and administering the federal regulation. Nevertheless, in some of our earlier cases, we have articulated certain criteria for how we are to determine whether to grant deference to a state agency's interpretation of its own regulation. More particularly, 12 years after deciding Reserve Mining, we rendered a decision in St. Otto's Home v. Minnesota Department of Human Services that provides us with guidance for deciding the issue before us. 437 N.W.2d 35 (Minn.1989).

St. Otto's Home addressed a state agency's interpretation of a regulation promulgated by that agency. 437 N.W.2d at 40. We stated in St. Otto's Home that we give considerable deference to a state agency's construction of its "own regulation." Id. But, unlike the case before us, in St. Otto's Home we were not required to decide whether an agency's "own regulation" is limited to regulations promulgated by that agency or also includes regulations coming from another source that the agency is legally required to enforce and administer. Yet, a United States Supreme Court case cited in St. Otto's Home provides us with a reference point on this issue. Id. (citing Udall v. Tallman, 380 U.S. 1, 16, 85 S.Ct. 792, 13 L.Ed.2d 616 (1965)). In Udall, the Supreme Court reasoned that deference to an agency's interpretation of a statute is appropriate, particularly "when the administrative practice at stake involves a contemporaneous construction of a statute by the [people] charged with the responsibility of setting its machinery in motion; of making the parts work efficiently and smoothly while they are yet untried and new." 380 U.S. at 16, 85 S.Ct. 792 (quoting Power Reactor Dev. Co. v. Intl' Union of Elec., Radio & Mach. Workers, 367 U.S. 396, 408, 81 S.Ct. 1529, 6 L.Ed.2d 924 (1961)). We agree with the Supreme Court's reasoning in Udall and conclude that an agency's "own regulation" may include a regulation that the agency is legally required to enforce and administer, even if the regulation was not promulgated by the agency.

This broader definition of an agency's "own regulation" is supported by our recent decision in In re Excess Surplus Status of Blue Cross & Blue Shield of Minn. (BCBSM), 624 N.W.2d 264 (Minn.2001), in which we gave deference to the Minnesota Department of Commerce's determination that Blue Cross and Blue Shield's proposal to bring its excess surplus into compliance with the law did not satisfy the requirements of Minn.Stat. § 62C.09 (2000). 624 N.W.2d at 283-84. We concluded in BCBSM that

[t]he agency decision-maker is presumed to have the expertise necessary to decide technical matters within the scope of the agency's authority, and judicial deference, rooted in the separation of powers doctrine, is extended to an agency decision-maker in the interpretation of statutes that the agency is charged with administering and enforcing.

Id. at 278 (emphasis added) (citation and footnote omitted). Not only is our decision in BCBSM consistent with the Supreme Court's holding in Udall, our conclusion in BCBSM goes beyond Udall because we state that when judicial deference which is rooted in the separation of powers doctrineis
appropriate, it goes beyond deference to agency-created regulations and also includes statutes administered by the agency that the agency is charged with enforcing and administering.

Based on the foregoing case law, we conclude that when addressing whether to *513 defer to an agency's interpretation of a federal regulation, an initial factor courts must consider is whether the agency is charged with enforcing and administering the regulation such that the regulation can be characterized as the agency's own regulation. Further, we conclude that when a state agency is charged with the day-to-day responsibility for enforcing and administering a federal regulation, courts should give deference to the agency's interpretation of that regulation when giving such deference meets the other criteria we have established for determining when it is appropriate for courts to defer to an agency's interpretation of its own regulation.

II.

Having concluded that we treat a federal regulation as a state agency's own regulation if the state agency is legally charged with the day-to-day enforcement and administration of the regulation, we now proceed to determine our standard for reviewing an agency's interpretation of its own regulation. In particular, we must identify what factors we should consider when determining whether courts should give deference to the agency's interpretation. We stated in Reserve Mining Co. that "decisions of administrative agencies enjoy a presumption of correctness, and deference should be shown by courts to the agencies' expertise and their special knowledge in the field of their technical training, education, and experience." 256 N.W.2d at 824. We concluded that the rationale for deference to administrative agency decisions is rooted in the separation of powers doctrine and the agency's training and expertise in the subject matter. See id. The legislature codified some aspects of this deferential review of agency decisions arising out of contested case proceedings in the Minnesota Administrative Procedures Act (MAPA).[8]See Minn. Ctr. for Envtl. Advocacy v. Minn. Pollution Control Agency (MCEA v. MPCA), 644 N.W.2d 457, 463 (Minn.2002). Thus, while it is evident that under certain circumstances we have a policy of deferring to an agency's interpretation, it is not clear what criteria and limits guide this policy. Therefore, it will be helpful to review when and why we have given deference in the past.

We have previously indicated that we will not defer to an agency's interpretation of its own regulation when the regulation's language is clear and capable of understanding. Resident v. Noot, 305 N.W.2d 311, 312 (Minn.1981). This approach comports with the approach articulated by the Supreme Court. Chevron U.S.A. Inc. v. Natural Res. Def. Council, *514 Inc., 467 U.S. 837, 842-43, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984) ("If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."); see also United States v. LaBonte, 520 U.S. 751, 762 n. 6, 117 S.Ct. 1673, 137 L.Ed.2d 1001 (1997) (concluding that a statute was unambiguous and therefore concluding that there was no need to decide whether an agency's interpretation was owed deference). But we have indicated we will defer to the agency's interpretation when the language is ambiguous and when the agency's interpretation is one of long standing. In re Estate of Abbott, 213 Minn. 289, 295, 6 N.W.2d 466, 469 (1942). In St. Otto's Home, we said we will give "considerable deference" "when the relevant language is unclear or susceptible to different interpretations." 437 N.W.2d at 40.

It also appears that if we conclude that the language of a regulation is unclear or susceptible to different interpretations, another factor influences whether we defer to an agency's interpretation. We have said that we defer to an agency's interpretation of its own regulations when the language of the regulation is subject to a construction that is so technical in nature that only a specialized agency has
the experience and expertise needed to understand the regulation. See BCBSM, 624 N.W.2d at 278; Reserve Mining Co., 256 N.W.2d at 824. Soon after BCBSM, we reached a similar result in MCEA v. MPCA, in which we concluded that the MPCA's interpretation and application of a state statute was entitled to deference on the basis that the interpretation of the statute required an application of the agency's training and expertise. 644 N.W.2d at 464. Specifically, we concluded that

the statute requires an EIS if Boise Cascade's project will result in "significant environmental effects." A determination whether significant environmental effects result from this project is primarily factual and necessarily requires application of the agency's technical knowledge and expertise to the facts presented. Accordingly, it is appropriate to defer to the agency's interpretation of whether the statutory standard is met.

Id. (citation omitted). In MCEA v. MPCA, we did not expressly conclude that the phrase "significant environmental effects" was ambiguous, but we concluded that the MPCA's training and expertise were necessary to interpret and apply the statute. See id. Our language in MCEA v. MPCA echoes in part the language we used in Reserve Mining Co. where we said that "decisions of administrative agencies enjoy a presumption of correctness, and deference should be shown by courts to the agencies' expertise and their special knowledge in the field of their technical training, education, and experience." 256 N.W.2d at 824.

In 1989, we attempted to summarize our approach to interpreting an agency's regulation in St. Otto's Home, where we said:

When a decision turns on the meaning of words in a statute or regulation, a legal question is presented. In considering such questions of law, reviewing courts are not bound by the decision of the agency and need not defer to agency expertise. When the agency's construction of its own regulation is at issue, however, considerable deference is given to the agency interpretation, especially when the relevant language is unclear or susceptible to different interpretations. If a regulation is ambiguous, agency interpretation will generally be upheld if it is reasonable. No deference is given to *515 the agency interpretation if the language of the regulation is clear and capable of understanding; therefore, the court may substitute its own judgment.

437 N.W.2d at 39-40 (citations omitted). Several key conclusions appear to emerge from our decisions in St. Otto's Home and other relevant cases. First, when a decision turns on the meaning of words in an agency's own regulation, it is a question of law that we review de novo. Second, when the language of the regulation is clear and capable of understanding, we give no deference to the agency's interpretation and we may substitute our own judgment for that of the agency. Third, when the relevant language of the regulation is unclear or susceptible to different reasonable interpretations, i.e., ambiguous, we will give deference to the agency's interpretation and will generally uphold that interpretation if it is reasonable.

What is not immediately apparent from our holding in St. Otto's Home and from our other decisions is when and why we are to consider an agency's expertise and special knowledge when determining whether to give deference to the agency's interpretation. As noted above, we have on several occasions stated that we will defer to an agency when that agency has expertise and special knowledge in its field of technical training, education, and expertise. See MCEA v. MPCA, 644 N.W.2d at 464; BCBSM, 624 N.W.2d at 278; Reserve Mining Co., 256 N.W.2d at 824. It is only after we read our prior case law closely that a pattern emerges for when and why we would consider an agency's expertise and special knowledge in the context of the case before us. Based on this case law,
we have deferred to an agency's expertise and special knowledge when (1) the agency is interpreting a regulation that is unclear and susceptible to more than one interpretation; and (2) the agency's interpretation is reasonable. Therefore, we conclude that when determining whether to defer to an agency, we will consider that agency's expertise and special knowledge.

In asserting its position that no deference should be given to the MPCA's interpretation of 40 C.F.R. § 122.4(i), the MCEA relies on In re Denial of Eller Media Company's Applications for Outdoor Advertising Device Permits (Eller Media), 664 N.W.2d 1, 7 (Minn.2003), where we noted that we have "the authority to review de novo errors of law which arise when an agency decision is based upon the meaning of words in a statute." In Eller Media, we did not explicitly discuss any of the factors discussed above; but on review of Eller Media, it becomes apparent that consideration of these factors is implicit in our analysis and decision. In that case, it appears that we first addressed whether the Minnesota Department of Transportation (MnDOT), the state agency at issue, was charged with enforcing and administering the law under reviewMinnesota's Outdoor Advertising Act. 664 N.W.2d at 7 (discussing Minn. Stat. ch. 173 (2002)). It also appears from our analysis that MnDOT was charged with administering this act. Id. (citing Minn.Stat. § 173.185 (2002)). But we apparently found no indication that the Outdoor Advertising Act was ambiguous or that MnDOT's training and expertise were required for its interpretation and application. Eller Media, 664 N.W.2d. at 6-7. Thus, under the factors established by our *516 prior case law in Reserve Mining Co., St. Otto's Home, BCBSM, and MCEA v. MPCA, we were not required to defer to MnDOT's interpretation of the Outdoor Advertising Act. Accordingly, our decision not to defer to the agency's interpretation in Eller Media did not overrule or modify the analytical framework we previously established for determining when we defer to an agency's interpretation of its own regulation.

In summary, we glean from our case law that review of an agency's interpretation of its own regulations is a question of law that courts review de novo. When answering this question, there are several factors courts need to consider when determining whether to give deference to an agency's interpretation. These factors include whether the agency is legally required to enforce and administer the regulation under review and whether the meaning of the words in the regulation is clear and unambiguous or is unclear and susceptible to different reasonable interpretations ambiguous. If a court concludes the meaning of the words in the regulation is clear and unambiguous, it need not defer to the agency's interpretation and may substitute its own judgment for that of the agency. If a court concludes that the meaning of the words in an agency's regulation is unclear and susceptible to different reasonable interpretations, the court must then determine whether the agency's interpretation is reasonable. When determining whether an agency's interpretation is reasonable, courts may consider the agency's expertise and special knowledge, especially when the construction of the regulation's language is so technical in nature that the agency's field of technical training, education, and experience is necessary to understand the regulation. When a court concludes that the language of the agency's regulation is unclear and susceptible to different reasonable interpretations and that the agency's interpretation of the regulation is reasonable, then the court will generally defer to the agency's interpretation.

III.

The next step in our analysis is to consider the foregoing factors in the context of the case before us. The first factor we address is whether the MPCA is legally required to enforce and administer 40 C.F.R. § 122.4(i). As noted above, the MPCA is charged by state and federal law with the day-to-day responsibility for enforcing and administering 40 C.F.R. § 122.4(i) in Minnesota. This point is
undisputed by the parties. Therefore, we conclude that 40 C.F.R. § 122.4(i) is properly characterized as and qualifies as the MPCA's own regulation. See Minn.Stat. § 115.03, subs. 1, 5; 40 C.F.R. § 123.25(a); Minn. R. 7050.0210, subp. 6(c) (2005).

IV.

Next, we must determine whether 40 C.F.R. § 122.4(i) is unclear and susceptible to different reasonable interpretations. When interpreting a statute or regulation, we first look to see whether the statute or regulation is clear or ambiguous on its face. See Am. Family Ins. Group v. Schroedl, 616 N.W.2d 273, 277 (Minn.2000) (interpreting a statute). If the words of the regulation are clear and free from ambiguity, "the letter of the law [regulation] shall not be disregarded under the pretext of pursuing the spirit." See Minn.Stat. § 645.16 (2006). As noted earlier, *517 a regulation is ambiguous if it is unclear or reasonably susceptible to more than one reasonable interpretation. See St. Otto's Home, 437 N.W.2d at 40. But the fact that a word has more than one meaning does not necessarily mean it is ambiguous. Board of Regents v. Royal Ins. Co. of Am., 517 N.W.2d 888, 892 (Minn.1994).

We have said that the meaning of a word depends on how it is being used. Id. Importantly, our determination of whether words or phrases are ambiguous does not depend on a reading of those words or phrases in isolation, but relies on the meaning assigned to the words or phrases in accordance with the apparent purpose of the regulation as a whole. See Metro Office Parks Co. v. Control Data Corp., 295 Minn. 348, 352, 205 N.W.2d 121, 124 (1973) (interpreting a contract provision). See also Chiodo v. Bd. of Educ., 298 Minn. 380, 382, 215 N.W.2d 806, 808 (1974) ("[W] ords of a statute are to be viewed in their setting, not isolated from their context.").

To determine if 40 C.F.R. § 122.4(i) is ambiguous in the context of the CWA, we must begin with the language of the regulation itself. 40 C.F.R. § 122.4(i) provides that "[n]o permit may be issued"

[t]o a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. The owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards or is not expected to meet those standards even after the application of the effluent limitations required by sections 301(b) (1)(A) and 301(b)(1)(B) of CWA, and for which the State or interstate agency has performed a pollutants load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that:

(1) There are sufficient remaining pollutant load allocations to allow for the discharge; and

(2) The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards.

(Emphasis added.) It is the phrase "cause or contribute to the violation of water quality standards" that is the source of most of the disagreement about the interpretation of 40 C.F.R. § 122.4(i).[11] In essence, the regulation precludes the issuance of a permit to a new discharge if issuance of the permit will "cause or contribute" to a water quality impairment. Unfortunately, the regulation does not define, elaborate on, or further explain the general term "cause or contribute." The MPCA maintains that because this part of the regulation is couched in these general terms, the duty falls to it, the regulating agency, to determine precisely what will fulfill the regulatory requirements the MPCA is charged with implementing under the CWA.
The MPCA concluded that "[t]he proposed increase in phosphorus load * * * is significantly less than the reduction in phosphorus load in the watershed from the upgrade of the Litchfield wastewater treatment facility. Because of the net reduction in the watershed, the proposed * * * facility will not contribute to water quality standards violations in Lake Pepin." *518 (Emphasis added.) The court of appeals reversed, concluding that "[a] plain reading of the phrase 'cause or contribute to the violation of water quality standards' indicates that, so long as some level of discharge may be causally attributed to the impairment of [impaired] waters, a permit shall not be issued." Cities of Annandale & Maple Lake, 702 N.W.2d at 775. The court further concluded that

the record demonstrates that, notwithstanding the reduction in phosphorus resulting from other sources, the waters at issue remain impaired. And the amount of phosphorus discharged into the North Fork from the proposed wastewater-treatment plant, which is more than double the current phosphorus level of 1,400 pounds per year, will contribute to impaired nutrient levels in Lake Pepin.

_Id._ The dissent in essence agrees with the court of appeals' plain reading analysis that places a very narrow interpretation on 40 C.F.R. § 122.4(i) and thus would affirm the court of appeals.

It appears that the difference between the MPCA's interpretation of the regulation and the court of appeals' interpretation centers on whether any discharge to an "impaired water" necessarily "causes or contributes to a violation of water quality standards" or, alternatively, if net improvements to an "impaired water" can be considered in determining whether a new source or discharger "causes or contributes" to the violation of water quality standards. Specifically, the MPCA and the court of appeals ascribe different meanings to "cause or contribute" and "water quality standards" as used in the context of the CWA and as applied to the facts of this case.

The court of appeals' majority did not find any ambiguity in the regulation's language and held that under a "plain reading of the phrase 'cause or contribute to the violation of water quality standards,'" an NPDES permit may not be issued "so long as some level of discharge may be causally attributed to the impairment of Section 303(d) waters." Cities of Annandale & Maple Lake, 702 N.W.2d at 775. Because phosphorus "does not break down into smaller components," the court of appeals essentially concluded that any increase in phosphorus discharge from the proposed plant will affect the Lake Pepin watershed. _Id._ at 774.

In essence, the court of appeals' majority viewed the phrase "cause or contribute to the violation of water quality standards" in black-and-white terms. But both the Supreme Court and our court have said that "the meaning of statutory language, plain or not, depends on context." King v. St. Vincent's Hosp., 502 U.S. 215, 221, 112 S.Ct. 570, 116 L.Ed.2d 578 (1991); see also State v. Donaldson, 41 Minn. 74, 80, 42 N.W. 781, 782 (1889) (noting that even when "the words are plain," ambiguity "may be created by the context"). Therefore, we must view the words of the regulation "in their setting, not isolated from their context." Chiodo v. Bd. of Educ., 298 Minn. at 382, 215 N.W.2d at 808. See also Metro Office Parks Co., 295 Minn. at 352, 205 N.W.2d at 124. Here, the regulation must be interpreted within the context of the language of the CWA. Such an approach is consistent with the approach taken by other courts, which have "favored a 'whole act' approach to the Clean Water Act." 3B Norman J. Singer, _Statutes and Statutory Construction_ § 77:4 (6th ed.2003).

The MPCA found that the proposed plant, when operating at capacity, would increase phosphorus discharge into the North Fork by approximately 2,200 pounds annually over that which is currently discharged by the Maple Lake plant. But the MPCA found that this *519 increase in phosphorus
discharge would be offset by an approximate 53,500-pound reduction in phosphorus discharge into the North Fork due to the upgrade of a wastewater treatment plant in nearby Litchfield. Based on this offset, the MPCA concluded that the proposed plant would not contribute to water quality standards violations in the Lake Pepin watershed and therefore granted the permit.

The court of appeals' majority in reversing the MPCA concluded that there is no "indication that a discretionary system of offsets is authorized" under 40 C.F.R. § 122.4(i). 702 N.W.2d at 774-75. Nevertheless, the court of appeals concluded that its decision to reverse the MPCA did not represent a complete ban on discharge[12] that would reach waters already in violation of existing water quality standards, which type of ban was proscribed by the holding of the United States Supreme Court in Arkansas v. Oklahoma. 702 N.W.2d at 775-76 (citing 503 U.S. at 108, 112 S.Ct. 1046). But on appeal the MPCA contends that the court of appeals' interpretation is contrary to the Supreme Court's holding in Arkansas and will effectively mean that no new permits can be issued to wastewater treatment plants where the phosphorous discharge will flow into impaired waters, at least not before TMDLs are established.[13]

Given the Supreme Court's holding in Arkansas, we conclude that the court of appeals' narrow reading of the regulation in essence imposes a complete ban on new facilities like the one proposed here and that such an interpretation is unreasonable. In Arkansas, the owners of a new wastewater treatment plant in the state of Arkansas applied for a permit to discharge up to 6.1 million gallons of effluent per day into an unnamed stream. 503 U.S. at 95, 112 S.Ct. 1046. The stream ultimately flowed into the Illinois River in Oklahoma. Id. Oklahoma asserted the discharge into a tributary of the Illinois River would violate its water quality standards which provide that no degradation of water quality shall be allowed in the upper Illinois River. Id. An administrative law judge "found that there would be no detectable violation of [Oklahoma's water quality standards]" from the proposed plant and approved the permit. Id. at 97, 112 S.Ct. 1046. On appeal, the Tenth Circuit Court of Appeals reversed the issuance of the permit, holding that "the Clean Water Act prohibits granting an NPDES permit * * * where applicable water quality standards have already been violated." State of Okla. v. *520 Envtl. Prot. Agency, 908 F.2d 595, 616 (10th Cir.1990).

The Supreme Court granted certiorari and reversed, concluding that the Tenth Circuit "construed the Clean Water Act to prohibit any discharge of effluent that would reach waters already in violation of existing water quality standards. We find nothing in the Act to support this reading." Arkansas, 503 U.S. at 107, 112 S.Ct. 1046 (footnote omitted). "Thus, rather than establishing the categorical ban announced by the [Tenth Circuit]which might frustrate the construction of new plants that would improve existing conditions the Clean Water Act vests in the EPA and the States broad authority to develop long-range, area-wide programs to alleviate and eliminate existing pollution." 503 U.S. at 108, 112 S.Ct. 1046. The dissent also notes and refers to the latter clause from Arkansas; but it is also important to note that the language that precedes this clause, which language explicitly rejected the Tenth Circuit's narrow interpretation of the CWA, rejected a categorical ban that might frustrate the construction of new plants that would improve existing conditions.

The Supreme Court in Arkansas did not address the use of offsets in determining whether a new discharge would cause or contribute to the violation of water quality standards, but the Environmental Appeals Board (EAB), which is the final EPA decisionmaker on administrative appeals under the CWA, has applied the principles underlying Arkansas to a situation similar to the case before us. Carlota Copper Co., 11 Envtl. Admin. Decisions 692 (Sept. 30, 2004) (order denying review). In Carlota Copper Co., several environmental groups challenged the issuance of an NPDES permit to the Carlota Copper Company for a new open-pit copper mine project that would discharge effluent

into an impaired body of water. *Id.* at 702-06. The permit required Carlota to partially remediate, as an offset against Carlota's proposed new copper discharge, another of its copper mines, which was located upstream from the proposed mine. *Id.* at 705. In its order denying review of the permit, the EAB stated:

There is nothing in * * * 40 C.F.R. section 122.4(i) providing that an impaired water segment needs to be restored prior to allowing new source discharges into the water body. The Board declines to endorse Petitioners' interpretation because to do so would perpetrate the very outcome the Supreme Court in *Arkansas v. Oklahoma* sought to avoid (adoption of a rigid approach that might frustrate the construction of new facilities that would improve existing conditions). The Board finds no clear error in the Region's determination that Carlota's discharges will not "cause or contribute" to a violation of water quality standards, but rather, Carlota will improve existing conditions because the reductions that will result from its activities are greater than the projected discharges. In addition, the Region did not clearly err in determining that "there are sufficient remaining pollutant load allocations to allow for Carlota's discharges."

11 Envtl. Admin. Decisions at 695 (syllabus) (emphasis added) (citation omitted).

The MCEA argues that *Carlota* is distinguishable because (1) the permit in *Carlota* was issued post-TMDL; and (2) the offset was required to be made by the same discharger that was applying for the new permit. Although it is correct that the Carlota permit was issued after a TMDL had been established for the impaired body of water, the first sentence of 40 C.F.R. § 122.4(i) applies regardless of whether a TMDL has been completed. *See Carlota, 11 Envtl. Admin. Decisions at 706; 40 C.F.R. § 122.4(i).* Even when a TMDL has been established, a permitting authority must still determine that the new discharge will not cause or contribute to the violation of water quality standards. Therefore, the fact that the Carlota permit was issued post-TMDL does not mean that the EAB's reasoning is not helpful and important when we analyze the issuance of a pre-TMDL permit.

Moreover, while MCEA argues that *Carlota* is distinguishable because it dealt with an offset made by the same discharger, the propriety of considering offsets from another discharger when determining whether a new source or discharge causes or contributes to the violation of water quality standards is supported by the EPA's interpretation of 40 C.F.R. § 122.4(i). The interpretation is documented in an EPA memorandum in *Sierra Club v. Clifford*, No. Civ.A. 96-0527, 1999 WL 33494861 (E.D.La.1999). In its memorandum in *Clifford*, the EPA stated:

To date, EPA has not formally interpreted 40 C.F.R. § 122.4(i) with respect to what conditions, if present, would allow for permit issuance to new sources or new dischargers proposing to discharge their effluent into impaired waters. * * * In practice, permitting has occurred in at least three situations that EPA believes are consistent with current regulations.

Defendants' Response Memorandum in Support of Schedule for Preparation of Total Maximum Daily Loads at 52, *Clifford*, 1999 WL 33494861. The EPA went on to identify three situations in which, by EPA practice, an NPDES permit may be issued to a new source or new discharger proposing to discharge effluent into impaired waters before completion of a TMDL. *Id.* at 52-53. The third situation identified by the EPA is

where it is demonstrated that other pollutant source reductions (such as nonpoint source reductions implemented by the discharger) will offset the discharge in a manner
consistent with [water quality standards]. The ultimate result of this type of "offset" or "trade" may be a net decrease in the loadings of the pollutant of concern in the CWA § 303(d) listed water, and therefore, EPA, by practice, has considered a discharge which has been offset in accordance with permit requirements not to "cause or contribute to a violation of water quality standards."

Id. at 53.

The court of appeals' majority concluded that the EPA's brief in Clifford could not be relied upon as documentation of the EPA's interpretation of 40 C.F.R. § 122.4(i) because the brief was drafted in the course of litigation and "the EPA's brief does not reference any preexisting ruling or practice with respect to 40 C.F.R. § 122.4(i)." Cities of Annandale & Maple Lake, 702 N.W.2d at 774 n. 4. The Supreme Court has concluded that a federal agency's interpretation of a law expressed in the course of litigation is not entitled to deference if it is "wholly unsupported by regulations, rulings, or administrative practice." Bowen v. Georgetown Univ. Hosp., 488 U.S. 204, 212, 109 S.Ct. 468, 102 L.Ed.2d 493 (1988). But contrary to the court of appeals' assertion, the EPA's brief in Clifford expressly identifies the EPA's existing "administrative practice" that reflects its interpretation of 40 C.F.R. § 122.4(i). Thus, we conclude that Bowen does not preclude the MPCA from relying on the EPA's brief in Clifford in its interpretation of 40 C.F.R. 122.4(i). Moreover, the position advanced by the EPA is compelling evidence that 40 C.F.R. 122.4(i) is susceptible to different reasonable interpretations.

*522 Finally, we note that the MPCA's interpretation of 40 C.F.R. 122.4(i) also finds support in the policy considerations behind the EPA's Final Water Quality Trading Policy, which was promulgated on January 13, 2003. This policy supports "pre-TMDL trading in impaired waters to achieve progress towards or the attainment of water quality standards." Env'tl. Prot. Agency, Water Quality Trading Policy, 68 Fed.Reg. 1610 (Jan. 13, 2003), available at http://www.epa.gov/owow/watershed/trading/finalpolicy2003.html. The EPA, in addressing the ground for its water quality trading policy and why it believes this policy provides greater flexibility and has the potential to achieve greater water quality and environmental benefits, stated:

Finding solutions to these complex water quality problems requires innovative approaches that are aligned with core water programs. Water quality trading is an approach that offers greater efficiency in achieving water quality goals on a watershed basis. It allows one source to meet its regulatory obligations by using pollutant reductions created by another source that has lower pollution control costs. Trading capitalizes on economies of scale and the control cost differentials among and between sources.

68 Fed.Reg. at 1609. While we are not dealing with a market-based program in the case before us, we conclude that much of the EPA's rationale on trading applies to the MPCA's consideration of offsets in enforcing and administering water quality regulations with respect to these two state subdivisionsthe Cities.

The foregoing analysis demonstrates that the interpretation of 40 C.F.R. 122.4(i) is not a clear-cut issue where we can just give effect to an unambiguously expressed intent and therefore substitute our judgment for that of the MPCA. Rather, our analysis reveals the differing interpretations that have been applied to this regulation. Therefore, we conclude that 40 C.F.R. 122.4(i) is unclear and susceptible to different reasonable interpretations. Accordingly, we must next proceed to determine if the MPCA's interpretation is reasonable and to what extent we are to consider the MPCA's expertise and special knowledge when making this determination.
V.

We next address whether, under 40 C.F.R. § 122.4(i), it is reasonable for the MPCA to consider offsets from another source within the watershed in determining whether a new discharge source causes or contributes to the violation of water quality standards. As an initial matter, we note that the focus of our inquiry is whether the MPCA's interpretation of 40 C.F.R. § 122.4(i) is reasonable under the circumstances of this casethat is, a case involving pollution offsets that are both contemporaneous and located in the same watershed. Further, the determination of whether the proposed joint wastewater treatment plant will "cause or contribute to the violation of water quality standards" requires some factual inquiry. Here, we note that the interpretation of "cause or contribute to the violation of water quality standards" is not unlike the question of whether "significant environmental effects" will result from a project, which we held in MCEA v. MPCA "necessarily requires application of the agency's technical knowledge and expertise to the facts presented." 644 N.W.2d at 464. Therefore, we will also address whether our interpretation of 40 C.F.R. § 122.4(i) requires the MPCA's training and expertise for its interpretation and application.

*523 The MPCA's strategy for addressing phosphorus in NPDES permitting demonstrates that the question of whether a particular source is contributing to the violation of water quality standards is not as simple as determining whether there is any net increase in phosphorus discharge from a particular source. The MPCA uses "basin/watershed management approaches as the main policy context for addressing phosphorus." See Minn. Pollution Control Agency, Strategy for Addressing Phosphorus in National Pollutant Discharge Elimination System (NPDES) Permitting (March 2000), available at http://www.pca.state.mn.us/water/pubs/phos-npdes-strategy.pdf (noting that because "[i]nformation and knowledge about nutrient management issues are changing rapidly," the strategy should be viewed as "transitional"). Under this strategy, the MPCA establishes an ambient water quality goal for the watershed for phosphorus. Minn. Pollution Control Agency, MPCA Phosphorus (P) Strategy: NPDES Permits at 2 (March 2000), http://www.pca.state.mn.us/water/pubs/phos-npdes.pdf (hereinafter NPDES Permits). This goal can be numeric (such as a percentage reduction) or narrative (such as "no net increase"), depending on the specific site and water resource.

The MPCA considers a number of variables in assessing how a particular discharge of phosphorus "affects" the watershed. See NPDES Permits at 2. The MPCA's assessment model "includes using standard lake/reservoir eutrophication models, data assessment, scientific research, and other information relating to the lake/reservoir and its tributaries, watershed, and cumulative point and nonpoint source phosphorus loads." Id. Using this assessment model, the MPCA determines whether "the individual contribution of the discharge" causes any adverse changes in terms of actual or predicted increases in chlorophyll-a concentration, increased frequency of nuisance algae blooms, reduced transparency, reduced dissolved oxygen concentrations, or related adverse responses to phosphorus. Id. This determination is typically made over a range in flow conditions after MPCA scientists review data and apply their "best professional judgment." Id. Further, the MPCA has adopted the concept of "de minimus phosphorus loadings"municipal facilities with a phosphorus load of 1,800 pounds per year or less. Id. at 3. In the MPCA's experience, these "small discharges" generally do not have "a measurable impact on the environment." Id.

In making its determination, the MPCA must also deal with difficult policy issues related to accommodating population growth in a state with significant surface waters, many of which are considered impaired. See NPDES Permits at 4. As previously noted, these are issues on which the CWA does not provide clear guidance. Because the MPCA's application of 40 C.F.R. § 122.4(i)

requires a careful balancing of competing policies and interests across the state, the agency must necessarily draw on its expertise and special knowledge. See Arkansas, 503 U.S. at 106, 112 S.Ct. 1046 (stating that in the CWA, Congress struck a careful balance among competing policies and interests). Here, we believe that any necessary policy determinations in interpreting the regulation are more properly left to the MPCA, the agency responsible for interpreting its regulation. Cf. Nat'l Cable & Telecommunications Ass'n v. Brand X Internet Servs., 545 U.S. 967, 1002-03, 125 S.Ct. 2688, 162 L.Ed.2d 820 (2005) (supporting deference to administrative agencies, particularly where the questions 'involve a subject matter [that] is technical, complex, and dynamic," as well as difficult policy judgments quoting Nat'l Cable & Telecommunications Ass'n, Inc. v. *524 Gulf Power Co., 534 U.S. 327, 339, 122 S.Ct. 782, 151 L.Ed.2d 794 (2002)). Therefore, for all the foregoing reasons, we conclude that the MPCA's technical expertise and training is necessary to interpret and apply 40 C.F.R. § 122.4(i).

Based on the foregoing, we conclude that when viewed in its setting and not isolated from its context, the broad nature of the phrase "cause or contribute to the violation of water quality standards" leaves leeway for the MPCA to make a range of policy judgments based on the MPCA's scientific and technical knowledge. Cf. Natural Res. Def. Council v. Costle, 568 F.2d 1369, 1382 (D.C.Cir.1977) ("conced[ing] necessary flexibility in the shaping of [NPDES] permits that is not inconsistent with the clear terms" of the CWA). Nothing in the language of the regulation or the structure of the CWA prohibits the MPCA from considering offsets in this situation. In light of the multitude of variables and possible approaches in determining whether a specific discharge of phosphorus will "cause or contribute to the violation of water quality standards" not the least of which is whether the MPCA should consider the discharge in isolation or in the context of other reductions in the watershed as a whole it appears that the MPCA's interpretation of 40 C.F.R. § 122.4(i) is reasonable.

Our analysis also shows that the MPCA's interpretation of 40 C.F.R. § 122.4(i) as allowing offsets in determining whether a new source will cause or contribute to the violation of water quality standards is supported by the reasoning of the Supreme Court in Arkansas, the EAB's decision in Carlota, the EPA's memorandum in Clifford, and the rationale behind the EPA's water quality trading policy. Moreover, we conclude that, when dealing with a situation like the one presented in this casetwo aging wastewater treatment facilities with expired NPDES permits, which are at or near capacity in a region of the state that is experiencing significant growth it was not unreasonable for the MPCA to allow a 2,200-pound per year (at capacity) increase in phosphorus discharge from a new wastewater treatment facility to be offset by a contemporaneous 53,500-pound per year decrease in a nearby facility that is located in the same watershed. Given the flexibility and broad authority delegated to states to develop "long-range, area-wide programs" for water quality and the lack of any express prohibition on offsets, we will not, under these circumstances, second-guess the reasonableness of the MPCA's decision that the Cities' new joint wastewater treatment facility will not "contribute to the violation of water quality standards." See Arkansas, 503 U.S. at 108, 114, 112 S.Ct. 1046 (stating that "[i]t is not our role, or that of the Court of Appeals, to decide which policy choice is the better one").

Accordingly, we conclude that the MPCA's interpretation of 40 C.F.R. § 122.4(i) as allowing offsets from another source in determining whether a new source will cause or contribute to the violation of water quality standards is reasonable and is consistent with the purposes and principles of the CWA.

VI.

In summary, we conclude that the MPCA is legally required to enforce and administer 40 C.F.R. § 122.4(i) as its own regulation, that 40 C.F.R. § 122.4(i) is ambiguous, and that consideration of the MPCA's training and expertise is necessary when we make a determination of whether the MPCA
interpretation of 40 C.F.R. § 122.4(i) to allow offsets from another source in determining whether a new source will cause or contribute to the violation of water quality standards is reasonable. Cf. *Arkansas*, 503 U.S. at 110, 112 S.Ct. 1046 (recognizing that the system of federally-approved state standards as applied in the interstate context constitutes federal law and the EPA's interpretation of the state's standard is entitled to deference). Further, we conclude that when we give the appropriate deference to the MPCA's interpretation of 40 C.F.R. § 122.4(i), we must uphold the MPCA's interpretation of the regulation because we have concluded that the agency's interpretation is reasonable and consistent with the purposes and principles of the CWA. See *St. Otto's Home*, 437 N.W.2d at 40. We also conclude that, at best, the narrow interpretation of 40 C.F.R. 122.4(i) adopted by the court of appeals' majority and the dissent demonstrates that the interpretation of the regulation's language is unclear and that it is and has been susceptible to different interpretations. At worst, such an interpretation is wrong and will perpetuate the very outcome the Supreme Court sought to avoid with its decision in *Arkansas v. Oklahoma* namely, the adoption of such a rigid approach that construction of new facilities that would improve existing conditions would be thwarted.

Finally, a few additional observations on the dissent are in order. At the core of our difference of opinion with the dissent is the dissent's conclusion that 40 C.F.R. § 122.4(i) unambiguously articulates an absolute prohibition that denies the MPCA the ability to issue a permit to the Cities for their proposed joint wastewater treatment facility. While we reach the opposite conclusion that the regulation is ambiguous as a result consider the dissent's adoption of MCEA's absolute prohibition argument to be too narrow an interpretation and too restrictive, we nevertheless have acknowledged that 40 C.F.R. § 122.4(i) is potentially susceptible to different interpretations. What we find problematic is the dissent's comment that "no rationale for deference is present in this case." This is not so. What we have done is to first apply the "own regulation" factor to determine if a deference analysis is appropriate. Then, after having answered the "own regulation" question in the affirmative, we have proceeded to thoroughly implement our standard deference analysis, which includes such factors as ambiguity, expertise, and reasonableness.

With respect to our standard deference analysis, we are in apparent agreement with the dissent that we should decide whether to accord deference on a case-by-case basis. And that is precisely what we have done here. Specifically, we have concluded that deference is warranted only after thoroughly considering multiple factors, not the single factor to which the dissent would reduce our analysis. Judicial deference to an agency's interpretation of its own regulation is rooted in the separation of powers doctrine. In the spirit of this doctrine, we acknowledge that an agency's training and expertise are helpful and frequently necessary to properly interpret and apply a regulation that is unclear and susceptible to more than one reasonable interpretation. Further, we disagree with the dissent's conclusion that, based on this opinion, the MPCA can use discharge reductions from the "distant past" or "unknown future" or "geographically distant locales" to "largely circumvent" its mandate. Given our conclusion that, under our standard deference analysis, reasonableness is necessarily determined using a case-by-case inquiry, our opinion does not authorize, much less invite, the MPCA to interpret 40 C.F.R. § 122.4(i) to allow discharge permits in cases involving offsets that are remote in either time or place.

For all the foregoing reasons, we hold that the court of appeals erred when it reversed the MPCA's decision to issue the NPDES permit for the Cities' proposed wastewater treatment plant.

Reversed.

ANDERSON, Russell A., C.J., took no part in the consideration or decision of this matter.

PAGE, Justice (dissenting).

I.

I respectfully dissent. While I agree that under some circumstances deference to a state agency's interpretation of a federal regulation may be appropriate, deference is not appropriate in this case. Judicial deference to an agency's interpretation of a regulation is inappropriate if the language of the regulation is unambiguous, as an agency is not permitted to contravene the plain meaning of the language used in the regulation. See St. Otto's Home v. Minn. Dep't of Human Servs., 437 N.W.2d 35, 40 (Minn.1989). While context may help us ascertain its plain meaning, see King v. St. Vincent's Hosp., 502 U.S. 215, 221, 112 S.Ct. 570, 116 L.Ed.2d 578 (1991), an examination of the actual language that comprises the text is always necessary to reach conclusions about meaning. In this case, the court concludes that 40 C.F.R. § 122.4(i) (2006) is ambiguous without any analysis of the regulation's actual language and without explanation as to what in the language is unclear. Instead, the court lists various interpretations of 40 C.F.R. § 122.4(i) that have been offered in the course of other litigation. The fact that multiple interpretations have been suggested does not establish ambiguity, see Bank Midwest, Minnesota, Iowa, N.A. v. Lipetzky, 674 N.W.2d 176, 179 (Minn. 2004), yet the court concludes that the regulation is ambiguous simply because of "differing interpretations that have been applied to this regulation." Analyzing 40 C.F.R. § 122.4(i)'s actual language, I conclude that deference to the MPCA's interpretation of 40 C.F.R. § 122.4(i) is not warranted because the regulation is not ambiguous.

II.

Under 40 C.F.R. § 122.4(i), the Minnesota Pollution Control Agency (MPCA) may not issue a National Pollutant Discharge Elimination System (NPDES) permit "[i]f a new source or a new discharger, if the discharge from its construction or operation will cause or contribute[15] to the violation of water quality standards." 40 C.F.R. § 122.4(i) (footnote added). The language of the regulation is clear. No permit may be issued to a new source or discharger if it will cause a violation of water quality standards, e.g., if the addition of phosphorus discharged from the source seeking the permit would elevate phosphorus levels in a body of water above the level that constitutes a violation. Nor may a permit be issued to a new source or discharger if it will contribute to a violation of water quality standards, e.g., if the new source would discharge phosphorus into a body of water previously determined to have phosphorus levels in excess of permissible levels. In determining whether a discharge will cause or contribute to a *527 violation, the MPCA may take into consideration pollution from sources other than the source seeking a permit, but only so far as is necessary to determine whether a violation exists before or will exist after issuance of the permit.

It is undisputed that phosphorus levels in the Lake Pepin Watershed currently exceed water quality standards and, as determined by the MPCA, are in violation of those standards. Minn. Pollution Control Agency, MPCA 2002 303(d) List (Jan. 22, 2003), available at http://www.pca.state.mn.us/publications/reports/tmdl-2002list.pdf. The MPCA has also determined that the proposed Maple Lake/Annandale facility will increase the cities' discharge of phosphorus into that watershed from approximately 1,400 pounds of phosphorus annually to about 3,600 pounds annually. Thus, while the proposed facility will not cause a violation of the standards, it is clear that an increase of 2,200 pounds of phosphorus per year will "help bring about," that is, contribute to, a water quality standards violation in the Lake Pepin Watershed. It is also clear that the violation will occur irrespective of any action taken by the City of Litchfield to reduce the amount of phosphorus it
discharges into the watershed. By granting the NPDES permit to the cities of Maple Lake and Annandale, the MPCA ignores the unambiguous language of 40 C.F.R. § 122.4(i). Therefore, the MPCA's issuance of the NPDES permit should be reversed.

III.

Even if the plain meaning of the regulation's language is ignored and it is assumed that the regulation is ambiguous, I would still conclude that deference is inappropriate because none of the traditional rationales for deferring to an agency's interpretation of a regulation are present in this case.

Under our case law, one rationale for giving deference to an agency's reasonable interpretation of an ambiguous regulation is rooted in the separation of powers doctrine. Reserve Mining Co. v. Herbst, 256 N.W.2d 808, 824 (Minn.1977). More specifically, deference is warranted to prevent the judiciary from exercising excessive or potentially unconstitutional discretion over policy matters. Id. at 825.

Such matters are properly the domain of the legislative and executive branches, which have both greater fact-finding abilities and greater political accountability than the judiciary. See id. However, when judicial review of an agency's interpretation of a regulation does not involve second-guessing policy decisions, the separation of powers doctrine is not a reason to defer to an agency's interpretation. To the contrary, the separation of powers doctrine compels the judiciary to ensure that other governmental bodies execute laws faithfully.

Another rationale for deferring to an agency's interpretation of a regulation arises when, unlike the judiciary, the agency has "the expertise necessary to decide technical matters." In re Excess Surplus Status of Blue Cross & Blue Shield of Minn., 624 N.W.2d 264, 278 (Minn.2001). Accordingly, if the regulation refers to an open-ended technical or scientific matter for example, a requirement that the agency determine whether certain effluents cause or contribute to a public health hazard, see Minn. Ctr. for Envtl. Advocacy v. Minn. Pollution Control Agency, 644 N.W.2d 457, 464 (Minn.2002) (interpreting "significant environmental effects") then it would be appropriate to defer to the agency's interpretation, provided that interpretation is reasonable. However, when interpretation of the regulation does not implicate any special scientific or technical expertise, there is no reason to defer. In fact, when the regulation requires only a straightforward reading, it is the judiciary that possesses the special expertise.

Deference may also be appropriate "when the administrative practice at stake involves a contemporaneous construction of a statute [or regulation] by the [people] charged with the responsibility of setting its machinery in motion, of making the parts work efficiently and smoothly while they are yet untried and new." Udall v. Tallman, 380 U.S. 1, 16, 85 S.Ct. 792, 13 L.Ed.2d 616 (1965) (internal quotation marks omitted); see also Resident v. Noot, 305 N.W.2d 311, 312 (Minn.1981) (noting deference is appropriate "when the agency interpretation is one of long standing"); In re Estate of Abbott, 213 Minn. 289, 296, 6 N.W.2d 466, 469 (1942) ("That great weight should be given departmental construction of taxation statutes is dependent upon such construction's having been long continued and uniform **.") (Citations omitted.). In such a case, deference may be justified because longstanding and consistent interpretations may have encouraged reliance by the public and because the failure of a delegating authority to correct the interpretation implies either that the interpretation is correct or that the authority has willingly acquiesced to the agency's interpretation. See Udall, 380 U.S. at 17-18, 85 S.Ct. 792; In re Estate of Abbott, 213 Minn. at 296, 6 N.W.2d at 470. However, in cases in which the agency interpretation is recent, any reliance interest is diminished, and changed or new interpretations may be the product of political opportunism rather than good-faith efforts at interpretation.
As noted previously, no rationale for deference is present in this case. The MPCA is tasked with determining whether "construction or operation" of a new facility "will cause or contribute to the violation of water quality standards." 40 C.F.R. § 122.4(i). Water quality standards have been set and are not in dispute. See 33 U.S.C. § 1313 (2000). Therefore, on its face, that determination is simply a matter of measuring a known quantity of pollutants discharged against an established standard the water quality standards. Thus, a court's review of that determination does not require judicial second-guessing of either legislative or executive policy decisions. The only question presented is whether the policy decision made is being properly carried out. Nor does this case involve a scientific evaluation of technical or scientific matters beyond the comprehension of judges; it requires only a basic understanding of the English language and elementary number usage. Further, 40 C.F.R. § 122.4 (i) was promulgated in the mid-1980s, so the regulation cannot be considered "untried and new." Moreover, an interpretation first offered by the MPCA in 2004 or by the EPA in litigation in 1999 cannot be considered "contemporaneous."

In comparison, if we were reviewing water quality standards set by the MPCA, deference would be warranted because that decision requires the evaluation of the effects of discharged substances on wildlife and public safety, which implicates special technical and scientific competence. See Minn. Ctr. for Envtl. Advocacy, 644 N.W.2d at 465. It would also be warranted because selecting such standards requires policy judgments involving the analysis of costs and benefits of the different options and consideration of competing interests. For example, if it were concerned with population growth, the MPCA could have presumably indexed water quality standards to population. Thus, if we were being asked to review the actual standards selected by the MPCA, considerations related to the separation of powers doctrine would make deference entirely appropriate. *529 Similarly, if we were being asked to review the MPCA's methods for measuring contaminants existing in a body of water or in effluent from a discharger, the agency's decisions would also merit deference, as those decisions would clearly require application of the agency's special scientific and technical knowledge. However, once water quality standards have been established and the appropriate measurements have been taken, neither expertise nor separation of powers should permit the MPCA latitude to redefine "cause or contribute" in order to ignore those standards.

In determining that we should defer to the MPCA's interpretation of 40 C.F.R. § 122.4(i), the court conflates the deference that might properly be accorded the MPCA in setting water quality standards with a reason to defer to the agency's interpretation of all other aspects of the regulatory scheme. In doing so, the court blurs the line between setting the standards and determining whether an action will cause or contribute to the violation of those standards, and on that basis claims that the issue before the court is both a matter of policy and a matter implicating special expertise. It is neither.

IV.

Even if it is assumed that the regulation is ambiguous and that some or all of the traditional reasons for deferring to the agency's interpretation of the regulation are present, before deference is appropriate, the agency's interpretation must be reasonable, as a court should not allow an agency to impose a meaning on a legal authority that its text will not bear. See St. Otto's Home, 437 N.W.2d at 40. Here, the court determines that the MPCA's interpretation of 40 C.F.R. § 122.4(i) is reasonable without ever connecting that interpretation to the language of the regulation. Instead, the court describes the complicated analysis chosen by the MPCA to address phosphorus discharge in the NPDES permitting system and announces that these matters are within the MPCA's discretion.[16] However, if the MPCA's chosen interpretation is incompatible with the text of 40 C.F.R. § 122.4(i),
the complexity of or the care taken in applying that interpretation is not helpful. Because the language of the regulation, as informed by any relevant agency expertise, is a necessary touchstone for determining the reasonableness of the interpretation, the court's failure to discuss whether and how the MPCA's interpretation is supported by the language of 40 C.F.R. § 122.4(i) undermines its reasonableness conclusion. When examined in light of the regulation's language, the interpretation of 40 C.F.R. § 122.4(i) offered by the MPCA is not reasonable.

As an initial matter, the court is mistaken when it suggests that the U.S. Supreme Court's decision in Arkansas v. Oklahoma, *530 503 U.S. 91, 112 S.Ct. 1046, 117 L.Ed.2d 239 (1992), establishes the reasonableness of the MPCA's interpretation. First, Arkansas v. Oklahoma does not stand for the proposition that it is unreasonable to interpret 40 C.F.R. § 122.4(i) as prohibiting issuance of all NPDES permits in connection with waters in violation of water quality standards. Arkansas v. Oklahoma involved interpretation of the Clean Water Act itself, 40 C.F.R. § 122.4(d), and Oklahoma state standards requiring "no degradation of water quality." 503 U.S. at 95, 117, 112 S.Ct. 1046. It did not involve interpretation of 40 C.F.R. § 122.4(i) and the phrase "cause or contribute." While the court in Arkansas v. Oklahoma did hold that nothing in the Clean Water Act established a categorical ban on "any discharge of effluent that would reach waters already in violation of existing water quality standards," id. at 107, 112 S.Ct. 1046, the Court did not hold that the EPA was without authority to promulgate a regulation establishing a categorical ban on issuance of NPDES permits for bodies of water in violation of water quality standards. To the contrary, the court stated that the Act "vests in the EPA the States broad authority to develop long-range, area-wide programs to alleviate and eliminate existing pollution."[17]Id. at 108, 112 S.Ct. 1046. The EPA used that broad authority in promulgating 40 C.F.R. § 122.4(i). Second, it does not follow from a fair reading of Arkansas v. Oklahoma that the pollution offset proposed for the Lake Pepin Watershed District, as advocated by the MPCA here, is reasonable.

Moreover, there is nothing in the text of 40 C.F.R. § 122.4(i) that suggests that one discharger may be allowed to increase its allowable discharge simply because another discharger has taken steps to reduce its discharge. In addition, the MPCA's interpretation appears to be in conflict with the goals of both the NPDES permitting scheme and the Clean Water Act, under which the NPDES permit system operates. I presume that elimination of pollutant discharge is a goal of the National Pollutant Discharge Elimination System, and the purpose of the Clean Water Act "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a) (2000) (emphasis added); see also 33 U.S.C. § 1251(b) (2000) ("It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this chapter."). (Emphasis added.). In contrast, the MPCA's interpretation of 40 C.F.R. § 122.4(i), which permits discharge offsets, is not limited in either time or place. Under this interpretation, presumably the MPCA may consider offsets based on discharge reductions from the distant past and unknown future as well as from geographically distant locales, which would largely circumvent any mandate to improve water quality and reduce *531 pollution. To hold that the MPCA's interpretation is reasonable is to hold that reading the "cause or contribute" language out of 40 C.F.R. § 122.4(i) is also reasonable. It is also to hold that the MPCA has unfettered discretion to issue permits allowing polluters to cause or contribute to violations of water quality standards. But none of these holdings are reasonable. Thus, I conclude that the MPCA's interpretation of 40 C.F.R. § 122.4(i) in this case is not reasonable.

V.

In summary, 40 C.F.R. § 122.4(i) is not ambiguous, there are no factors present in this case that would indicate that deference to the MPCA's interpretation of the regulation is appropriate, and the MPCA's interpretation of the regulation is not reasonable. Accordingly, I would affirm the court of appeals' reversal of the MPCA's decision to issue the NPDES permit.

MEYER, Justice (dissenting).

I join in the dissent of Justice Page.

NOTES

[1] The MPCA, which has a commissioner and a nine-member Citizens' Board with the commissioner serving as chair of the board, administers the laws relating to preservation of the environment and protection of the public health consistent with the economic welfare of the state. Minn.Stat. ch. 116 (2006).

[2] There was also a discussion of whether a contested case hearing was required. The MPCA concluded that a contested case hearing was not required because the first and third standards for granting a contested case hearing under Minn. R. 7000.1900, subp. 1 (2005), had not been satisfied. This conclusion by the MPCA has not been challenged on appeal.

[3] A total maximum daily load (TMDL) is the sum of pollutants a body of water can absorb from all point and nonpoint sources, plus a margin of safety, and still meet water quality standards for its designated uses. Claudia Copeland, Congressional Research Serv. Report for Congress, Clean Water Act and TMDLs (Sept. 11, 1997), available at http://wwwcsonline.org/nlc/ersreports/water/h20-24.cfm (last visited Apr. 27, 2007). "According to the EPA [Environmental Protection Agency], a TMDL provides a holistic view of a watershed measuring the effect of each pollution source on the entire system. It also provides a framework for identifying specific actions needed to reach water quality standards." Id.

[4] The MCEA did not initially seek review of this issue nor did it conditionally seek review of the issue in its response to the Cities' and MPCA's petitions for review.

[5] The court of appeals also stated that "the [M]PCA concedes that this phosphorus will affect the Lake Pepin watershed." Cities of Annandale & Maple Lake, 702 N.W.2d at 774. It is not clear from the record whether the MPCA made such a concession.


[8] In *Minn. Ctr. for Envtl. Advocacy v. Minn. Pollution Control Agency*, we expanded the application of the MAPA beyond decisions arising out of contested case proceedings and held that the MAPA also applies to "an area such as environmental review, uniquely involving application of an agency's expertise, technical training, and experience" even if the decision was not the result of a contested case proceeding. 644 N.W.2d, 457, 463-64 (Minn. 2002). This case falls within the area of environmental review, and therefore application of the MAPA standards is appropriate. See Minn.Stat. ch. 14 (2006). The MAPA provides that a court may reverse or modify an agency's decision if the substantial rights of the petitioners may have been prejudiced because the administrative finding, inferences, conclusion, or decisions are:

(a) in violation of constitutional provisions; or

(b) in excess of the statutory authority or jurisdiction of the agency; or

(c) made upon unlawful procedure; or

(d) *affected by other error of law*; or

(e) unsupported by substantial evidence in view of the entire record as submitted; or

(f) arbitrary or capricious.


[9] Our case law also indicates that we will consider the agency's expertise and special knowledge when reviewing an agency's application of a regulation when application of the regulation is "primarily factual and necessarily requires application of the agency's technical knowledge and expertise to the facts presented." *MCEA v. MPCA*, 644 N.W.2d at 464. But this is not the situation that confronts us in this case.


[11] The parties and amici also disagree whether an NPDES permit may be issued before a TMDL has been completed. As previously noted, the court of appeals held that 40 C.F.R. § 122.4(i) does not bar issuance of an NPDES permit before a TMDL has been completed, but no party sought review of this issue. Accordingly, we do not consider it.

[12] While the court of appeals stated that its decision did not amount to a complete or categorical ban of discharge, amici League of Minnesota Cities and Wright County Mayors Association note that, following the court's decision, "[a]t least 15 of the League's member cities have already been notified by the MPCA that they will not be eligible for new facility permits as a result of the court of appeals' decision."

[13] We have held that a statute (or regulation) is ambiguous if it is susceptible to more than one reasonable interpretation. See *Weinberger v. Maplewood Review*, 668 N.W.2d 667, 672 (Minn.2003). Therefore, the differing interpretations by the MPCA and the court of appeals might, standing alone, support an argument that reasonable minds may differ on the plain and ordinary meaning of "cause or
contribute to a violation of water quality standards" and therefore the phrase is ambiguous. But such disagreement is not our standard for determining ambiguity. In the context of interpreting contract language, we have said, "the mere fact that a court has disagreed on the interpretation of contract language is not determinative that the contract language is ambiguous." Bank Midwest, Minnesota, Iowa, N.A. v. Lipetzky, 674 N.W.2d 176, 179 (Minn.2004) (citing Republic Nat'l Life Ins. Co. v. Lorraine Realty Corp., 279 N.W.2d 349, 354 (Minn.1979)).

[14] We note that the deferential approach we take with respect to the MPCA is similar to that taken by the Supreme Court in Arkansas where the Court gave deference to the EPA’s interpretation of a similar standard. 503 U.S. at 112, 112 S.Ct. 1046.

[15] "To cause" means "[t]o bring about" or "[t]o produce" an effect, result, or consequence." American Heritage Dictionary 305 (3rd ed.1996). "Contribute" means "[t]o give or supply in common with others" and "[t]o help bring about a result [or to] act as a factor." Id. at 410.

[16] Significantly, the MPCA’s analysis for addressing phosphorus discharge in the NPDES permitting process for bodies of water in violation of water quality standards for phosphorus is not as complicated as the court implies. Further, the court misrepresents the MPCA’s policy by neglecting to mention that such bodies of water appear to be exempted from the normal NPDES permitting analysis. See Minn. Pollution Control Agency, MPCA Phosphorus (P) Strategy: NPDES Permits at 1 (March 2000), available at http://www.pca.state.mn.us/water/pubs/phos-ndes.pdf ("For water quality segments that are impaired or threatened for phosphorus or phosphorus-related conditions as listed on the 303(d) list [i.e., in violation of water quality standards], the MPCA shall use its authority to limit point-source discharges, including existing discharges, by including phosphorus limits where appropriate in NPDES permits as part of a TDML allocation of point and/or nonpoint discharges.").

[17] I note that the MPCA’s interpretation of 40 C.F.R. § 122.4(i) does nothing to "alleviate and eliminate existing pollution." To the contrary, because there is no indication that the reduction in phosphorus discharge from the Litchfield facility is contingent on approval of the permit for the Annandale/Maple Lake facility, the MPCA’s interpretation will result in increased pollution. Moreover, while the Court in Arkansas v. Oklahoma expresses concern about "frustrat[ing] the construction of new plants that would improve existing conditions," see 503 U.S. at 108, 112 S.Ct. 1046, denial of a NPDES permit in this case will do nothing to prevent construction of facilities that, unlike the proposed Annandale/Maple Lake facility, will actually improve water quality.
$401. Construction of bridges, causeways, dams or dikes generally; exemptions

It shall not be lawful to construct or commence the construction of any bridge, causeway, dam, or dike over or in any port, roadstead, haven, harbor, canal, navigable river, or other navigable water of the United States unless the consent of Congress to the building of such structures has been obtained and until the plans for (1) the bridge or causeway shall have been submitted to and approved by the Secretary of Transportation, or (2) the dam or dike shall have been submitted to and approved by the Chief of Engineers and Secretary of the Army. However, such structures may be built under authority of the legislature of a State across rivers and other waterways the navigable portions of which lie wholly within the limits of a single State, provided the location and plans thereof are submitted to and approved by the Secretary of Transportation or by the Chief of Engineers and Secretary of the Army before construction is commenced. When plans for any bridge or other structure have been approved by the Secretary of Transportation or by the Chief of Engineers and Secretary of the Army, it shall not be lawful to deviate from such plans either before or after completion of the structure unless modification of said plans has previously been submitted to and received the approval of the Secretary of Transportation or the Chief of Engineers and the Secretary of the Army. The approval required by this section of the location and plans or any modification of plans of any bridge or causeway does not apply to any bridge or causeway over waters that are not subject to the ebb and flow of the tide and that are not used and are not susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce.


Codification

Section is from act Mar. 3, 1899, popularly known as the “Rivers and Harbors Appropriation Act of 1899”, and together with section 403 of this title superseded act Sept. 19, 1890, ch. 907, §7, 26 Stat. 454, as amended by act July 13, 1892, ch. 158, §3, 27 Stat. 88, which prohibited the erection of obstructions to navigation, and prohibited the erection of bridges over navigable waters under State legislation before the approval of the plans by the Secretary of War, and prohibited the alteration of channels unless authorized by that Secretary.

Amendments

1983—Pub. L. 97–449 amended section generally to reflect transfer of certain functions, powers, and duties of Secretary of the Army under this section to Secretary of Transportation. See Transfer of Functions note below.


Transfer of Functions

Enforcement functions of Secretary or other official in Department of Transportation related to compliance with permits for bridges across navigable waters issued under this section with respect to pre-construction, construction, and initial operation of transportation system for Canadian and Alaskan natural gas were transferred to the Federal Inspector, Office of Federal Inspector for the Alaska Natural Gas Transportation System, until the first anniversary of date of initial operation of the Alaska Natural Gas Transportation System, see Reorg. Plan No. 1 of 1979, §§102(c), 203(a), 44 F.R. 33663, 33666, 93 Stat. 1373, 1376, effective July 1, 1979, set out in the Appendix to Title 5, Government Organization and Employees, Office of Federal Inspector for the Alaska Natural Gas Transportation System abolished and functions and authority vested in Inspector transferred to Secretary of Energy by section 3012(b) of Pub. L. 102–486, set out as an Abolition of Office of Federal Inspector note under section 710e of Title 15, Commerce and Trade. Functions and authority vested in Secretary of Energy subsequently transferred to Federal Coordinator for Alaska Natural Gas Transportation Projects by section 720h(f) of Title 15.


$402. Construction of bridges, etc., over Illinois and Mississippi Canal

The provisions of section 401 of this title are made applicable alike to the completed and uncompleted portions of the Illinois and Mississippi Canal. Whenever the Secretary of the Army shall approve plans for a bridge to be built across said canal he may, in his discretion, and subject to such terms and conditions as in his judgment are equitable, expedient, and just to the public, grant to the person or corporation building and owning such bridge a right of way across the lands of the United States on either side of and adjacent to the said canal; also the privilege of occupying so much of said lands as may be necessary for the piers, abutments, and other portions of the bridge structure and approaches.


Codification

Section is from part of act June 13, 1902, popularly known as the “Rivers and Harbors Appropriation Act of 1902”.

Change of Name

Department of War designated Department of the Army and title of Secretary of War changed to Secretary of the Army by section 205(a) of act July 26, 1947, ch. 343, title II, 61 Stat. 501. Section 205(a) of act July 26, 1947, was repealed by section 53 of act Aug. 10, 1956, ch. 1041, 70A Stat. 641. Section 205(a) of act Aug. 10, 1956, enacted “Title 10, Armed Forces” which in sections 3010 to 3013 continued Department of the Army under administrative supervision of Secretary of the Army.

Transfer of Functions

Functions, powers, and duties of Secretary of the Army and other offices and officers of Department of the Army under section 401 of this title to extent that they relate generally to location and clearances of bridges and causeways in navigable waters of United States transferred to and vested in Secretary of Trans-

§ 403. Obstruction of navigable waters generally; wharves; piers, etc.; excavations and filling in

The creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is prohibited; and it shall not be lawful to build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the Chief of Engineers and authorized by the Secretary of the Army; and it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army prior to beginning the same.


CODIFICATION
Section is from act Mar. 3, 1899, popularly known as the “Rivers and Harbors Appropriation Act of 1899”.

PRIOR PROVISIONS
This section and section 9 of act Mar. 3, 1899 (section 401 of this title), superseded provisions of act Sept. 19, 1890, ch. 907, §7, 26 Stat. 454, as amended by act July 13, 1892, ch. 158, §3, 27 Stat. 110, which prohibited the erection of obstructions to navigation, and prohibited the erection of bridges over navigable waters under State legislation before the approval of the plans by the Secretary of War, and prohibited the alteration of channels unless authorized by said Secretary.

CHANGE OF NAME
Department of War designated Department of the Army and title of Secretary of War changed to Secretary of the Army by section 205(a) of act July 26, 1947, ch. 343, title II, 61 Stat. 501. Section 205(a) of act July 26, 1947, was repealed by section 53 of act Aug. 10, 1956, ch. 1041, 70A Stat. 641. Section 1 of act Aug. 10, 1956, enacted “Title 10, Armed Forces” which in sections 3010 to 3013 continued Department of the Army under administrative supervision of Secretary of the Army.

TRANSFER OF FUNCTIONS
Enforcement functions of Secretary of the Army, Chief of Engineers, or other official in Corps of Engineers of the United States Army related to compliance with permits for structures in navigable waters issued under this section with respect to pre-construction, construction, and initial operation of transportation system for Canadian and Alaskan natural gas were transferred to the Federal Inspector, Office of Federal Inspector for the Alaska Natural Gas Transportation System, until the first anniversary of date of initial operation of the Alaska Natural Gas Transportation System, under the direction of the Attorney-General of the United States.

The continuance of any such obstruction, except bridges, piers, docks, and wharves, and similar structures erected for business purposes, whether heretofore or hereafter created, shall constitute an offense and each week's continuance of any such obstruction shall be deemed a separate offense. Every person and every corporation which shall be guilty of creating or continuing any such unlawful obstruction in this act mentioned, or who shall violate the provisions of the last four preceding sections of this act, shall be deemed guilty of a misdemeanor, and each week's continuance thereof shall be punished by a fine not exceeding five thousand dollars, or by imprisonment (in the case of a natural person) not exceeding one year, or by both such punishments, in the discretion of the court, the creating or continuing of any unlawful obstruction in this act mentioned may be prevented and such obstruction may be caused to be removed by the injunction of any district court exercising jurisdiction in any district in which such obstruction may be threatened or may exist; and proper provision may be made for the enforcement of this act to the Code, see Tables.

REFERENCES IN TEXT
This act, referred to in text, is act Sept. 19, 1890, ch. 907, 26 Stat. 426. Sections 6 to 9 of the Act are not classified to the Code. For complete classification of this act to the Code, see Tables.

CODIFICATION
Text of section, which was previously omitted from the Code, was restored in view of conflicting court decisions as to whether or not section had been repealed or superseded. See eg. United States v. Wishkah Boom Co., 136 F. 42 (9th Cir. 1905); (appeal dismissed [1906] 202 U.S. 613); United States v. Wilson, 235 F.2d 251 (2d Cir. 1956).

§ 403b. Lighting at docks and boat launching facilities

Whenever the Secretary considers a permit application for a dock or a boat launching facility
and operation of a deepwater port, including applications for section 10, section 404 and section 103 permits which may also be required pursuant to the authorities listed in §320.2 and the policies specified in §320.4 of this part.

(k) The Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.) expresses the intent of Congress that marine mammals be protected and encouraged to develop in order to maintain the health and stability of the marine ecosystem. The Act imposes a perpetual moratorium on the harassment, hunting, capturing, or killing of marine mammals and on the importation of marine mammals and marine mammal products without a permit from either the Secretary of the Interior or the Secretary of Commerce, depending upon the species of marine mammal involved. Such permits may be issued only for purposes of scientific research and for public display if the purpose is consistent with the policies of the Act. The appropriate Secretary is also empowered in certain restricted circumstances to waive the requirements of the Act.

(l) Section 7(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1278 et seq.) provides that no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration.

(m) The Ocean Thermal Energy Conversion Act of 1980 (42 U.S.C. section 9101 et seq.) establishes a licensing regime administered by the Administrator for the ownership, construction, location, and operation of ocean thermal energy conversion (OTEC) facilities and plantships. An application for an OTEC license filed with the Administrator constitutes an application for all federal authorizations required for ownership, construction, location, and operation of an OTEC facility or plantship, except for certain activities within the jurisdiction of the Coast Guard. This includes applications for section 10, section 404, section 103 and other DA authorizations which may be required.

(n) Section 402 of the Clean Water Act authorizes EPA to issue permits under procedures established to implement the National Pollutant Discharge Elimination System (NPDES) program. The administration of this program can be, and in most cases has been, delegated to individual states. Section 402(b)(6) states that no NPDES permit will be issued if the Chief of Engineers, acting for the Secretary of the Army and after consulting with the U.S. Coast Guard, determines that navigation and anchorage in any navigable water will be substantially impaired as a result of a proposed activity.

(o) The National Fishing Enhancement Act of 1984 (Pub. L. 98–623) provides for the development of a National Artificial Reef Plan to promote and facilitate responsible and effective efforts to establish artificial reefs. The Act establishes procedures to be followed by the Corps in issuing DA permits for artificial reefs. The Act also establishes the liability of the permittee and the United States. The Act further creates a civil penalty for violation of any provision of a permit issued for an artificial reef.

§320.4 General policies for evaluating permit applications.

The following policies shall be applicable to the review of all applications for DA permits. Additional policies specifically applicable to certain types of activities are identified in 33 CFR parts 321 through 324.

(a) Public Interest Review. (1) The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur, are therefore determined by the outcome of this general balancing process. That
decision should reflect the national concern for both protection and utilization of important resources. All factors which may be relevant to the proposal must be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency’s 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines and criteria (see §§320.2 and 320.3), a permit will be granted unless the district engineer determines that it would be contrary to the public interest.

(b) Effect on wetlands. (1) Most wetlands constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest. For projects to be undertaken or partially or entirely funded by a federal, state, or local agency, additional requirements on wetlands considerations are stated in Executive Order 11990, dated 24 May 1977.

(2) The following general criteria will be considered in the evaluation of every application:

(i) The relative extent of the public and private need for the proposed structure or work;

(ii) Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and

(iii) The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.

(3) The specific weight of each factor is determined by its importance and relevance to the particular proposal. Accordingly, how important a factor is and how much consideration it deserves will vary with each proposal. A specific factor may be given great weight on one proposal, while it may not be present or as important on another. However, full consideration and appropriate weight will be given to all comments, including those of federal, state, and local agencies, and other experts on matters within their expertise.

(2) Wetlands considered to perform functions important to the public interest include:

(i) Wetlands which serve significant natural biological functions, including food chain production, general habitat and nesting, spawning, rearing and resting sites for aquatic or land species;

(ii) Wetlands set aside for study of the aquatic environment or as sanctuaries or refuges;

(iii) Wetlands the destruction or alteration of which would affect detrimentally natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, current patterns, or other environmental characteristics;

(iv) Wetlands which are significant in shielding other areas from wave action, erosion, or storm damage. Such wetlands are often associated with barrier beaches, islands, reefs and bars;

(v) Wetlands which serve as valuable storage areas for storm and flood waters;

(vi) Wetlands which are ground water discharge areas that maintain minimum baseflows important to aquatic resources and those which are prime natural recharge areas;

(vii) Wetlands which serve significant water purification functions; and

(viii) Wetlands which are unique in nature or scarce in quantity to the region or local area.

(3) Although a particular alteration of a wetland may constitute a minor change, the cumulative effect of numerous piecemeal changes can result in a major impairment of wetland resources. Thus, the particular wetland site for which an application is made...
will be evaluated with the recognition that it may be part of a complete and interrelated wetland area. In addition, the district engineer may undertake, where appropriate, reviews of particular wetland areas in consultation with the Regional Director of the U. S. Fish and Wildlife Service, the Regional Director of the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration, the Regional Administrator of the Environmental Protection Agency, the local representative of the Soil Conservation Service of the Department of Agriculture, and the head of the appropriate state agency to assess the cumulative effect of activities in such areas.

(4) No permit will be granted which involves the alteration of wetlands identified as important by paragraph (b)(2) of this section or because of provisions of paragraph (b)(3), of this section unless the district engineer concludes, on the basis of the analysis required in paragraph (a) of this section, that the benefits of the proposed alteration outweigh the damage to the wetlands resource. In evaluating whether a particular discharge activity should be permitted, the district engineer shall apply the section 404(b)(1) guidelines (40 CFR part 230.10(a) (1), (2), (3)).

(5) In addition to the policies expressed in this subpart, the Congressional policy expressed in the Estuary Protection Act, Pub. L. 90-454, and state regulatory laws or programs for classification and protection of wetlands will be considered.

(c) Fish and wildlife. In accordance with the Fish and Wildlife Coordination Act (paragraph 320.3(e) of this section) district engineers will consult with the Regional Director, U. S. Fish and Wildlife Service, the Regional Director, National Marine Fisheries Service, and the head of the agency responsible for fish and wildlife for the state in which work is to be performed, with a view to the conservation of wildlife resources by prevention of their direct and indirect loss and damage due to the activity proposed in a permit application. The Army will give full consideration to the views of those agencies on fish and wildlife matters in deciding on the issuance, denial, or conditioning of individual or general permits.

(d) Water quality. Applications for permits for activities which may adversely affect the quality of waters of the United States will be evaluated for compliance with applicable effluent limitations and water quality standards, during the construction and subsequent operation of the proposed activity. The evaluation should include the consideration of both point and non-point sources of pollution. It should be noted, however, that the Clean Water Act assigns responsibility for control of non-point sources of pollution to the states. Certification of compliance with applicable effluent limitations and water quality standards required under provisions of section 401 of the Clean Water Act will be considered conclusive with respect to water quality considerations unless the Regional Administrator, Environmental Protection Agency (EPA), advises of other water quality aspects to be taken into consideration.

(e) Historic, cultural, scenic, and recreational values. Applications for DA permits may involve areas which possess recognized historic, cultural, scenic, conservation, recreational or similar values. Full evaluation of the general public interest requires that due consideration be given to the effect which the proposed structure or activity may have on values such as those associated with wild and scenic rivers, historic properties and National Landmarks, National Rivers, National Wilderness Areas, National Seashores, National Recreation Areas, National Lakeshores, National Parks, National Monuments, estuarine and marine sanctuaries, archeological resources, including Indian religious or cultural sites, and such other areas as may be established under federal or state law for similar and related purposes. Recognition of those values is often reflected by state, regional, or local land use classifications, or by similar federal controls or policies. Action on permit applications should, insofar as possible, be consistent with, and avoid significant adverse effects on the values or purposes for which those classifications, controls, or policies were established.

(f) Effects on limits of the territorial sea. Structures or work affecting coastal
waters may modify the coast line or base line from which the territorial sea is measured for purposes of the Submerged Lands Act and international law. Generally, the coast line or base line is the line of ordinary low water on the mainland; however, there are exceptions where there are islands or low-tide elevations offshore (the Submerged Lands Act, 43 U.S.C. 1301(a) and United States v. California, 381 U.S.C. 139 (1965), 382 U.S. 448 (1966)). Applications for structures or work affecting coastal waters will therefore be reviewed specifically to determine whether the coast line or base line might be altered. If it is determined that such a change might occur, coordination with the Attorney General and the Solicitor of the Department of the Interior is required before final action is taken. The district engineer will submit a description of the proposed work and a copy of the plans to the Solicitor, Department of the Interior, Washington, DC 20240, and request his comments concerning the effects of the proposed work on the outer continental rights of the United States. These comments will be included in the administrative record of the application. After completion of standard processing procedures, the record will be forwarded to the Chief of Engineers. The decision on the application will be made by the Secretary of the Army after coordination with the Attorney General.

(g) Consideration of property ownership. Authorization of work or structures by DA does not convey a property right, nor authorize any injury to property or invasion of other rights.

(1) An inherent aspect of property ownership is a right to reasonable private use. However, this right is subject to the rights and interests of the public in the navigable and other waters of the United States, including the federal navigation servitude and federal regulation for environmental protection.

(2) Because a landowner has the general right to protect property from erosion, applications to erect protective structures will usually receive favorable consideration. However, if the protective structure may cause damage to the property of others, adversely affect public health and safety, adversely impact floodplain or wetland values, or otherwise appears contrary to the public interest, the district engineer will so advise the applicant and inform him of possible alternative methods of protecting his property. Such advice will be given in terms of general guidance only so as not to compete with private engineering firms nor require undue use of government resources.

(3) A riparian landowner’s general right of access to navigable waters of the United States is subject to the similar rights of access held by nearby riparian landowners and to the general public’s right of navigation on the water surface. In the case of proposals which create undue interference with access to, or use of, navigable waters, the authorization will generally be denied.

(4) Where it is found that the work for which a permit is desired is in navigable waters of the United States (see 33 CFR part 329) and may interfere with an authorized federal project, the applicant should be apprised in writing of the fact and of the possibility that a federal project which may be constructed in the vicinity of the proposed work might necessitate its removal or reconstruction. The applicant should also be informed that the United States will in no case be liable for any damage or injury to the structures or work authorized by Sections 9 or 10 of the Rivers and Harbors Act of 1899 or by section 404 of the Clean Water Act which may be caused by, or result from, future operations undertaken by the Government for the conservation or improvement of navigation or for other purposes, and no claims or right to compensation will accrue from any such damage.

(5) Proposed activities in the area of a federal project which exists or is under construction will be evaluated to insure that they are compatible with the purposes of the project.

(6) A DA permit does not convey any property rights, either in real estate or material, or any exclusive privileges. Furthermore, a DA permit does not authorize any injury to property or invasion of rights or any infringement of Federal, state or local laws or regulations. The applicant’s signature on an application is an affirmation that the
applicant possesses or will possess the requisite property interest to undertake the activity proposed in the application. The district engineer will not enter into disputes but will remind the applicant of the above. The dispute over property ownership will not be a factor in the Corps public interest decision.

(h) Activities affecting coastal zones. Applications for DA permits for activities affecting the coastal zones of those states having a coastal zone management program approved by the Secretary of Commerce will be evaluated with respect to compliance with that program. No permit will be issued to a non-federal applicant until certification has been provided that the proposed activity complies with the coastal zone management program and the appropriate state agency has concurred with the certification or has waived its right to do so. However, a permit may be issued to a non-federal applicant if the Secretary of Commerce, on his own initiative or upon appeal by the applicant, finds that the proposed activity is consistent with the objectives of the Coastal Zone Management Act of 1972 or is otherwise necessary in the interest of national security. Federal agency and Indian tribe applicants for DA permits are responsible for complying with the Coastal Zone Management Act’s directives for assuring that their activities directly affecting the coastal zone are consistent, to the maximum extent practicable, with approved state coastal zone management programs.

(i) Activities in marine sanctuaries. Applications for DA authorization for activities in a marine sanctuary established by the Secretary of Commerce under authority of section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended, will be evaluated for impact on the marine sanctuary. No permit will be issued until the applicant provides a certification from the Secretary of Commerce that the proposed activity is consistent with the purposes of Title III of the Marine Protection, Research and Sanctuaries Act of 1972, as amended, and can be carried out within the regulations promulgated by the Secretary of Commerce to control activities within the marine sanctuary.

(j) Other Federal, state, or local requirements. (1) Processing of an application for a DA permit normally will proceed concurrently with the processing of other required Federal, state, and/or local authorizations or certifications. Final action on the DA permit will normally not be delayed pending action by another Federal, state or local agency (See 33 CFR 325.2 (d)(4)). However, where the required Federal, state and/or local authorization and/or certification has been denied for activities which also require a Department of the Army permit before final action has been taken on the Army permit application, the district engineer will, after considering the likelihood of subsequent approval of the other authorization and/or certification and the time and effort remaining to complete processing the Army permit application, either immediately deny the Army permit without prejudice or continue processing the application to a conclusion. If the district engineer continues processing the application, he will conclude by either denying the permit as contrary to the public interest, or denying it without prejudice indicating that except for the other Federal, state or local denial the Army permit could, under appropriate conditions, be issued. Denial without prejudice means that there is no prejudice to the right of the applicant to reinstate processing of the Army permit application if subsequent approval is received from the appropriate Federal, state and/or local agency on a previously denied authorization and/or certification. Even if official certification and/or authorization is not required by state or federal law, but a state, regional, or local agency having jurisdiction or interest over the particular activity comments on the application, due consideration shall be given to those official views as a reflection of local factors of the public interest.

(2) The primary responsibility for determining zoning and land use matters rests with state, local and tribal governments. The district engineer will normally accept decisions by such governments on those matters unless there are significant issues of overriding national importance. Such
issues would include but are not necessarily limited to national security, navigation, national economic development, water quality, preservation of special aquatic areas, including wetlands, with significant interstate importance, and national energy needs. Whether a factor has overriding importance will depend on the degree of impact in an individual case.

(3) A proposed activity may result in conflicting comments from several agencies within the same state. Where a state has not designated a single responsible coordinating agency, district engineers will ask the Governor to express his views or to designate one state agency to represent the official state position in the particular case.

(4) In the absence of overriding national factors of the public interest that may be revealed during the evaluation of the permit application, a permit will generally be issued following receipt of a favorable state determination provided the concerns, policies, goals, and requirements as expressed in 33 CFR parts 320-324, and the applicable statutes have been considered and followed: e.g., the National Environmental Policy Act; the Fish and Wildlife Coordination Act; the Historical and Archeological Preservation Act; the National Historic Preservation Act; the Endangered Species Act; the Coastal Zone Management Act; the Marine Protection, Research and Sanctuaries Act of 1972, as amended; the Clean Water Act, the Archeological Resources Act, and the American Indian Religious Freedom Act. Similarly, a permit will generally be issued for Federal and Federally-authorized activities; another federal agency’s determination to proceed is entitled to substantial consideration in the Corps’ public interest review.

(5) Where general permits to avoid duplication are not practical, district engineers shall develop joint procedures with those local, state, and other Federal agencies having ongoing permit programs for activities also regulated by the Department of the Army. In such cases, applications for DA permits may be processed jointly with the state or other federal applications to an independent conclusion and decision by the district engineer and the appropriate Federal or state agency. (See 33 CFR 325.2(e).)

(6) The district engineer shall develop operating procedures for establishing official communications with Indian Tribes within the district. The procedures shall provide for appointment of a tribal representative who will receive all pertinent public notices, and respond to such notices with the official tribal position on the proposed activity. This procedure shall apply only to those tribes which accept this option. Any adopted operating procedures shall be distributed by public notice to inform the tribes of this option.

(k) Safety of impoundment structures. To insure that all impoundment structures are designed for safety, non-Federal applicants may be required to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons and, in appropriate cases, that the design has been independently reviewed (and modified as the review would indicate) by similarly qualified persons.

(l) Floodplain management. (1) Floodplains possess significant natural values and carry out numerous functions important to the public interest. These include:

(i) Water resources values (natural moderation of floods, water quality maintenance, and groundwater recharge);
(ii) Living resource values (fish, wildlife, and plant resources);
(iii) Cultural resource values (open space, natural beauty, scientific study, outdoor education, and recreation); and
(iv) Cultivated resource values (agriculture, aquaculture, and forestry).

(2) Although a particular alteration to a floodplain may constitute a minor change, the cumulative impact of such changes may result in a significant degradation of floodplain values and functions and in increased potential for harm to upstream and downstream activities. In accordance with the requirements of Executive Order 11988, district engineers, as part of their public interest review, should avoid to the extent practicable, long and short term significant adverse impacts associated with the occupancy and modification of

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floodplains, as well as the direct and indirect support of floodplain development whenever there is a practicable alternative. For those activities which in the public interest must occur in or impact upon floodplains, the district engineer shall ensure, to the maximum extent practicable, that the impacts of potential flooding on human health, safety, and welfare are minimized, the risks of flood losses are minimized, and, whenever practicable the natural and beneficial values served by floodplains are restored and preserved.

(3) In accordance with Executive Order 11988, the district engineer should avoid authorizing floodplain developments whenever practicable alternatives exist outside the floodplain. If there are no such practicable alternatives, the district engineer shall consider, as a means of mitigation, alternatives within the floodplain which will lessen any significant adverse impact to the floodplain.

(m) Water supply and conservation. Water is an essential resource, basic to human survival, economic growth, and the natural environment. Water conservation requires the efficient use of water resources in all actions which involve the significant use of water or that significantly affect the availability of water for alternative uses including opportunities to reduce demand and improve efficiency in order to minimize new supply requirements. Actions affecting water quantities are subject to Congressional policy as stated in section 101(g) of the Clean Water Act which provides that the authority of states to allocate water quantities shall not be superseded, abrogated, or otherwise impaired.

(n) Energy conservation and development. Energy conservation and development are major national objectives. District engineers will give high priority to the processing of permit actions involving energy projects.

(2) The policy of considering harbor lines as guidance for assessing impacts on navigation continues.

(3) Protection of navigation in all navigable waters of the United States continues to be a primary concern of the federal government.

(4) District engineers should protect navigational and anchorage interests in connection with the NPDES program by recommending to EPA or to the state, if the program has been delegated, that a permit be denied unless appropriate conditions can be included to avoid any substantial impairment of navigation and anchorage.

(p) Environmental benefits. Some activities that require Department of the Army permits result in beneficial effects to the quality of the environment. The district engineer will weigh these benefits as well as environmental detriments along with other factors of the public interest.

(q) Economics. When private enterprise makes application for a permit, it will generally be assumed that appropriate economic evaluations have been completed, the proposal is economically viable, and is needed in the market place. However, the district engineer in appropriate cases, may make an independent review of the need for the project from the perspective of the overall public interest. The economic benefits of many projects are important to the local community and contribute to needed improvements in the local economic base, affecting such factors as employment, tax revenues, community cohesion, community services, and property values. Many projects also contribute to the National Economic Development (NED), (i.e., the increase in the net value of the national output of goods and services).
(r) Mitigation. (1) Mitigation is an important aspect of the review and balancing process on many Department of the Army permit applications. Consideration of mitigation will occur throughout the permit application review process and includes avoiding, minimizing, rectifying, reducing, or compensating for resource losses. Losses will be avoided to the extent practicable. Compensation may occur on-site or at an off-site location. Mitigation requirements generally fall into three categories.

(i) Project modifications to minimize adverse project impacts should be discussed with the applicant at pre-application meetings and during application processing. As a result of these discussions and as the district engineer’s evaluation proceeds, the district engineer may require minor project modifications. Minor project modifications are those that are considered feasible (cost, constructability, etc.) to the applicant and that, if adopted, will result in a project that generally meets the applicant’s purpose and need. Such modifications can include reductions in scope and size; changes in construction methods, materials or timing; and operation and maintenance practices or other similar modifications that reflect a sensitivity to environmental quality within the context of the work proposed. For example, erosion control features could be required on a fill project to reduce sedimentation impacts or a pier could be reoriented to minimize navigational problems even though those projects may satisfy all legal requirements (paragraph (r)(1)(ii) of this section) and the public interest review test (paragraph (r)(1)(iii) of this section) without such modifications.

(ii) Further mitigation measures may be required to satisfy legal requirements which are specifically identifiable, reasonably likely to occur, and of importance to the human or aquatic environment. Also, all mitigation will be directly related to the impacts of the proposal, appropriate to the scope and degree of those impacts, and reasonably enforceable. District engineers will require all forms of mitigation, including compensatory mitigation, only as provided in paragraphs (r)(1) (i) through (iii) of this section. Additional mitigation may be added at the applicants’ request.

PART 321—PERMITS FOR DAMS AND DIKES IN Navigable WATERS OF THE UNITED STATES

Sec.
321.1 General.
321.2 Definitions.
321.3 Special policies and procedures.


SOURCE: 51 FR 41227, Nov. 13, 1986, unless otherwise noted.

§ 321.1 General.

This regulation prescribes, in addition to the general policies of 33 CFR part 320 and procedures of 33 CFR part 325, those special policies, practices, and procedures to be followed by the Corps of Engineers in connection with

1 This is a general statement of mitigation policy which applies to all Corps of Engineers regulatory authorities covered by these regulations (33 CFR parts 320–330). It is not a substitute for the mitigation requirements necessary to ensure that a permit action under section 404 of the Clean Water Act complies with the section 404(b)(1) Guidelines. There is currently an interagency Working Group formed to develop guidance on implementing mitigation requirements of the Guidelines.
Minnesota Local/State/Federal Application Forms for Water/Wetland Projects

USE THIS APPLICATION FOR ANY PROJECT AFFECTING A LAKE, RIVER, STREAM OR WETLAND, INCLUDING:

Local Government Unit Approval Pursuant to Minnesota Wetlands Conservation Act (WCA)
Minnesota Department of Natural Resources (DNR) Permit to Work in Public Waters
Department of the Army Permit (33 CFR 325)

Note: The U.S. Army Corps of Engineers (COE) will forward application forms to the Minnesota Pollution Control Agency (MPCA) for processing if state water quality certification is required from the MPCA. You do not need to send this application to the MPCA.

This application packet includes:

Part I: The BASIC APPLICATION and the COE APPLICATION to be filled out by all applicants (see Instructions).

PART II: The REPLACEMENT PLAN SUPPLEMENT to be completed only for projects that impact wetlands and require a replacement plan for wetland mitigation. If you're not sure whether your project requires a replacement plan, call your Local Government Unit (LGU) or Soil and Water Conservation District (SWCD) office for guidance.

Do not proceed with your project until you have received all required approvals from your LGU, the DNR and the COE. If you wish to confirm the status of your application at any time, contact the agencies directly (see Instructions, page 2). Proceeding with work before all required authorizations are obtained may result in fines or other penalties, and may include a requirement to restore the project site to original condition.

If you have questions or need assistance with filling out these forms, contact your local SWCD office, your LGU, your Area DNR Waters office, or your COE field office (see Instructions, page 2).

If you believe that your project may be subject to watershed district, local zoning, or any other local regulations besides those of your LGU, contact those office(s) directly. If you are a Federal Farm Program participant and your project affects a wetland or water body on agricultural land, your eligibility for USDA benefits may be affected. Contact a Natural Resources Conservation Service office for further information.

A QUICK LOOK AT THE PROJECT APPLICATION PROCESS

Electronic files: Forms can be downloaded and filled out using Microsoft Word. Your input will be restricted to fill-in fields where users can enter text or check boxes. These areas appear gray on the screen, but not on the printed document.

Send copies of these completed application forms to your LGU, your Area DNR Waters office, and your COE regulatory office.

Any of the agencies may make initial contact with you to: a) inform you that it has no jurisdiction over your project; b) request additional information needed; or c) inform you of applicable fees.

When your application is considered complete and appropriate fees have been received (if requested) it will be distributed for appropriate review.

Following agencies’ reviews, you will be informed if it has been approved, approved with changes or conditions, withdrawn, or denied.

For information about state laws, rules and regulations that direct this process go to the web site www.revisor.leg.state.mn.us. For information on U.S. Army Corps of Engineers regulations go to the web site www.mvp.usace.army.mil.

Instructions for Part I

HELP 1: Every applicant must fill out Section 1. The applicant is the person, agency, company, corporation, or other organization that owns, leases, or holds other legal rights to the land where the project is located. Indicate names of multiple applicants on a separate sheet.

HELP 1A: Fill out Section 1A only if you have designated an authorized agent. An authorized agent may be an attorney, builder, consultant, contractor, engineer, or any other person or organization designated by the applicant to represent him/her in this process. An agent is not required.

HELP 5: Purpose, description and dimensions of project: State briefly (in a sentence or two) what you propose to do and why it is needed. Also, describe whether your project will involve any of the following:
- Construction of structures, filling, draining, dewatering, removing, excavating or repair.
- Construction of an access path, bridge, culvert, dam, ditch, dock, driveway, riprap, road, sand blanket, shore protection, or tile line.
- Construction of any structures on fill, piles or a float-supported platform. If so, describe.
- Dredging or discharging (placing fill material) into a wetland or other water body (including the temporary placement of material). If so, explain the specific purpose of the placement of the material (such as erosion control) and indicate how it will be done (such as with a backhoe or dragline). If dredged material is to be discharged on an upland site, identify the location of the site.
Include an overhead view drawing showing the work to be undertaken and its relative location on the property. Show items such as property boundaries or lot dimensions; location and extent of shoreline, wetlands and water; location and dimensions and footprint of the proposed project, structure or activity (include length, width, elevation and other measurements as appropriate); points of reference such as existing homes, structures, docks or landscape features; indication of north; and location of spoil and disposal sites (if applicable). Hand drawn, computer generated or professionally prepared drawings are acceptable, as long as they contain all necessary information clearly, accurately, and in adequate detail. Please include specific dimensions whenever possible. You may also include photos, if you wish. Paper copies should be limited to maximum dimensions of 11” by 17”. Computer files should be viewable in a PDF format; contact the agency for other usable formats.

HELP 7: For information regarding adjacent landowners, contact the tax assessor where the project is to be developed.

HELP 8: If any part of the work has already been completed, describe the area already developed. Include a description of structures completed; any dredged or fill material already discharged (including type of material and volume in cubic yards); acres or square feet filled (if a wetland or other water body); and whether the work was done under an existing permit (if so identify the authorization, if possible).

HELP 9: Other permits, reviews or approval related to the project may include the following: conditional use permit; plat approval; zoning variance; National Pollutant Discharge Elimination System permit; state disposal system permit (includes dredged material disposal); watershed district/watershed management organization permit (stormwater, erosion, floodplain); environmental assessment worksheet/environmental impact statement; hazardous waste site; feedlot permit; groundwater appropriation permit; or county/township driveway/road permit. Are you aware of any archeological or cultural resource determinations or surveys completed concerning the project or replacement site by the State Historic Preservation Office (SHPO) or others? If yes, please explain on a separate sheet or attach a copy of any determinations or surveys.

**Final Checklists (Part I)**

- Have you completed all of Part I (Page 1), plus the Federal application (Page 2)?
- Did you (and your agent, if applicable) sign Section 10 on page 1?
- Have you signed the Application for the Department of the Army Permit (Page 2) to seek Federal authorization of your project?
- Have you included the necessary attachments for Part I?

**Attachments must include:**
- Site Locator Map (Section 3)
- Type of Project (Section 4) (if additional space was needed)
- Overhead View of Project (Section 5 and HELP 5)
- Project Purpose, Description and Dimensions (Section 5) (if additional space was needed)

**Attachments may also include:**
- Applicant Contact Information (HELP 1) (if additional space was needed)
- Project Location (Section 3) (if additional space was needed)
- Project Alternatives (Section 6) (if additional space was needed)
- Photographs
- Adjoining Property Owners (Section 7) (if additional space was needed)
- Work Already Completed Section (Section 8) (if you answered YES)
- State Historic Preservation Office determination or survey

**Submitting Your Application**

Make three copies of the entire application and all attachments. Keep the original, and mail a complete copy of your application to each of the local, state, and Federal entities listed below. Be sure to include Part I and all attachments with each application.

**LOCAL:** Send to the appropriate Local Government Unit (LGU). If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

**STATE:** Send to your Area DNR Waters office, attention Area Hydrologist. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the DNR website (www.dnr.state.mn.us) to locate the Area Hydrologist for your location, or contact a Regional DNR office:

**WEB SITES:** BWSR: www.bwsr.state.mn.us U.S. ACOE: www.mvp.usace.army.mil DNR: www.dnr.state.mn.us MPCA: www.pca.state.mn.us
PART I: BASIC APPLICATION

“See HELP” directs you to important additional information and assistance in Instructions, Page 1.

1. LANDOWNER/APPLICANT CONTACT INFORMATION (See Help 1)
Name: Phone: E-mail:
Complete mailing address:

1A. AUTHORIZED AGENT (See Help 1A) (Only if applicable; an agent is not required)
Name: Phone: E-mail:
Complete mailing address:

2. NAME, TYPE AND SIZE OF PUBLIC WATERS or WETLANDS IMPACTED (Attach Additional Project Area sheets if needed)
Name or I.D. # of Waters Impacted (if applicable; if known):
(Check all that apply): ☐ Lake ☐ River ☐ Circular 39 Wetland type: ☐ 1, ☐ 1L, ☐ 2, ☐ 3, ☐ 4, ☐ 5, ☐ 6, ☐ 7, ☐ 8
Wetland plant community type*: ☐ shallow open water, ☐ deep marsh, ☐ shallow marsh, ☐ sedge meadow, ☐ fresh meadow,
☐ wet to wet-mesic prairie, ☐ calcareous fen, ☐ open bog or coniferous bog, ☐ shrub-carr/alder thicket,
☐ hardwood swamp or coniferous swamp, ☐ floodplain forest, ☐ seasonally flooded basin

Indicate size of entire lake or wetland (check one): ☐ Less than 10 acres (indicate size: ) ☐ 10 to 40 acres ☐ Greater than 40 acres

3. PROJECT LOCATION (Information can be found on property tax statement, property title or title insurance):
Project street address: Fire #: City (if applicable):
¼ Section: Section: Township #: Range #: County:
Lot #: Block: Subdivision: Watershed (name or #) UTM location: N E
Attach a simple site locator map. If needed, include on the map written directions to the site from a known location or landmark, and provide distances from known locations. Label the sheet SITE LOCATOR MAP.

4. TYPE OF PROJECT: Describe the type of proposed work. Attach TYPE OF PROJECT sheet if needed.

5. PROJECT PURPOSE, DESCRIPTION AND DIMENSIONS: Describe what you plan to do and why it is needed, how you plan to construct the project with dimensions (length, width, depth), area of impact, and when you propose to construct the project. This is the most important part of your application. See HELP 5 before completing this section; see What To Include on Plans (Instructions, page 1). Attach PROJECT DESCRIPTION sheet.

Footprint of project: acres or square feet drained, filled or excavated.

6. PROJECT ALTERNATIVES: What alternatives to this proposed project have you considered that would avoid or minimize impacts to wetlands or waters? List at least TWO additional alternatives to your project in Section 5 that avoid wetlands (one of which may be “no build” or “do nothing”), and explain why you chose to pursue the option described in this application over these alternatives. Attach PROJECT ALTERNATIVES sheet if needed.

7. ADJOINING PROPERTY OWNERS: For projects that impact more than 10,000 square feet of water or wetlands, list the complete mailing addresses of adjacent property owners on an attached separate sheet. (See HELP 7)

8. PORTION OF WORK COMPLETED: Is any portion of the work in wetland or water areas already completed? ☐ Yes ☐ No. If yes, describe the completed work on a separate sheet of paper labeled WORK ALREADY COMPLETED. (See HELP 8)

9. STATUS OF OTHER APPROVALS: List any other permits, reviews or approvals related to this proposed project that are either pending or have already been approved or denied on a separate attached sheet. See HELP 9.

10. I am applying for state and local authorization to conduct the work described in this application. I am familiar with the information contained in this application. To the best of my knowledge and belief, all information in Part I is true, complete, and accurate. I possess the authority to undertake the work described, or I am acting as the duly authorized agent of the applicant.

Signature of applicant (Landowner) Date Signature of agent (if applicable) Date

This block must be signed by the person who desires to undertake the proposed activity and has the necessary property rights to do so. If only the Agent has signed, please attach a separate sheet signed by the landowner, giving necessary authorization to the Agent.

*See Wetland Plants and Plant Communities of Minnesota and Wisconsin (Eggers and Reed, 1997) as modified by the Board of Water and Soil Resources, United States Army Corps of Engineers.
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325) OMB APPROVAL NO. 0710-003 Expires Dec 31, 2004

The public burden for this collection of information is estimated to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of these addresses. Completed applications must be submitted to the District engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT: Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research and Sanctuaries Act, 33 USC 1413, Section 103. Principal purpose: Information provided on this form will be used in evaluating the application for a permit. Routine uses: This information may be shared with the Department of Justice and other Federal, state, and local government agencies. Submission of requested information is voluntary; however, if information is not provided, the permit application cannot be evaluated nor can a permit be issued.

ITEMS 1 THROUGH 4 TO BE FILLED IN BY THE CORPS

1. APPLICATION NO.          2. FIELD OFFICE CODE          3. DATE RECEIVED          4. DATE APPLICATION COMPLETED

YOU DO NOT NEED TO COMPLETE ITEMS 6-10 and 12-25 in the SHADED AREAS.

All applicants must complete non-shaded items 5 and 26. If an agent is used, also complete items 8 and 11. This optional Federal form is valid for use only when included as part of this entire state application packet.

5. APPLICANT’S NAME          8. AUTHORIZED AGENT’S NAME AND TITLE (an agent is not required)

6. APPLICANT’S ADDRESS          9. AGENT’S ADDRESS

7. APPLICANT’S PHONE NO.          10. AGENT’S PHONE NO.

11. STATEMENT OF AUTHORIZATION (if applicable, complete only if authorizing an agent)

I hereby authorize to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT’S SIGNATURE: ____________________________ DATE: ____________

12. PROJECT NAME OR TITLE (see instructions)

13. NAME OF WATERBODY, IF KNOWN (if applicable)          14. PROJECT STREET ADDRESS (if applicable)

15. LOCATION OF PROJECT

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

17. DIRECTIONS TO THE SITE          18. NATURE OF ACTIVITY

19. PROJECT PURPOSE          20. REASON(S) FOR DISCHARGE

21. TYPES OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS

22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED

23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES _______ NO ____ IF YES, DESCRIBE COMPLETED WORK.

24. ADDRESSES OF ADJOINING PROPERTY OWNERS,

25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION.

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

Signature of applicant ____________________________ Date ____________

Signature of agent (if any) ____________________________ Date ____________

The application must be signed by the person who desires to undertake the proposed activity (applicant), or it may be signed by a duly authorized agent if the statement in Block 11 has been filled out and signed. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up with any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

ENG FORM 4345, Jul 97 EDITION OF FEB 94 IS OBSOLETE. (Proponent: CECW-OR)

Minnesota Local/State/Federal Application Forms for Water/Wetland Projects Page 2
FOR LGU USE ONLY:

Determination for Part I:
☐ No WCA Jurisdiction
☐ Exempt: No. ____ (per MN Rule 8420.0122)
☐ No Loss: ____ (A,B,..G, per MN Rule 8420.0220)
☐ Wetland Boundary or type
☐ Replacement required — applicant must complete Part II

COMPLETE THE SECTION BELOW ONLY IF REPLACEMENT IS NOT REQUIRED:

Application is (check one): ☐ Approved ☐ Approved with conditions (conditions attached) ☐ Denied

Comments/Findings: _______________________________________________________________________________________________________

________________________________________________________________________

LGU official signature     Date

Name and Title

For Agricultural and Drainage exemptions (MN Rule 8420.0122 Subps. 1 and 2B), LGU has received proof of recording of restrictions (per MN Rule 8420.0115):

________________________________________________________________________

County where recorded     Date     Document # assigned by recorder

________________________________________________________________________

LGU official signature     Date
Instructions For Part II

Complete those portions of Part II: Replacement Plan Supplement for which information is readily available (such as location, existing land use, size of impact area, etc.) A person certified in wetland delineation must determine items pertaining to specific wetland impacts (wetland type, predominant vegetation, watershed name, etc.) Contact the local soil and water conservation district (SWCD) office for further information on obtaining such items.

What to Include on Plans

Detailed overhead views of replacement site(s) (Part II), as well as profile view(s) of replacement site(s) (Part II), may be either hand drawn, computer generated or professionally prepared, as long as they contain all necessary information clearly, accurately, and in adequate detail. Please include specific dimensions whenever possible. You may also include photos, if you wish.

Overhead views of Part II replacement site(s) should include the following items that pertain to your project:
- Property boundaries and/or lot dimensions.
- Location and extent of shoreline, wetlands and water.
- Location and dimensions of proposed project, structure or activity. Include length, width, elevation and other measurements as appropriate.
- Points of reference (such as existing homes, structures, docks or landscape features).
- Location of inlet and outlet structures.
- Indication of north.
- Location of spoil and disposal sites (if applicable).
- Areas of wetland and upland plants established.

Profile views (side or cross-sectional views) should include the following items that pertain to your project:
- Location and dimensions of proposed project, structure or activity. Include elevation, depth, soil profile, side slope and other measurements as appropriate.
- Proposed water level elevation.

Final Checklists
Part II: Replacement Plan Supplement

☐ Have you completed all of Part II (pages 3-5)?
☐ Did you (or your agent) sign Section 19 on page 5?
☐ Have you included the necessary attachments for Part II?

Attachments must include:
☐ If the project includes any wetland banking (complete or partial), include Application for Withdrawal of Wetland Credits Form (Section 14)
☐ If the project includes any project-specific replacements (complete or partial), include:
  - Description of Replacement Wetland(s) Construction (Section 15)
  - Copy of vegetation management plan (Section 15)
  - Scale drawing of overhead view or replacement wetland (Section 18)
  - Scale drawing of profile view of replacement wetland (Section 18)

Attachments may also include:
☐ Additional description of Wetland Impact Charts (Section 11) (if additional space was needed)
☐ Additional Description of Replacement Wetlands charts (Section 17) (if additional space was needed)
☐ Additional soils information for created replacement wetland(s) (Section 18) (if available)

Note: To deposit surplus wetland credits in the State Wetland Bank, submit a Wetland Banking Application directly to your LGU (Section 16).

Preparing Your Application for Mailing

☐ To apply for both state and Federal authorization, your application must include Part I (Page 1), the Federal application (Page 2), and attachments as indicated on Final Checklist for Part I (Instructions, Page 2).
☐ Your application must also include Part II (Pages 3-5) and additional attachments as indicated on Final Checklist for Part II (above).
☐ Make three copies of the entire application and all attachments. Keep the original, and mail the three copies to the appropriate local, state, and Federal agencies (see Instructions for Part I for addresses).
11. DESCRIPTION OF WETLAND IMPACTS: Complete the chart below: 1) Use one row of boxes for each wetland impact; 2) If your project has more than one wetland impact, reference your overhead view (part of Section 5) to this chart by identifying and labeling “first impact” and “second impact” on your overhead view; 3) If you are identifying only one wetland type within a given wetland impact area, use the first dotted line and leave the others blank; 4) If you have chosen to identify more than one wetland type within a given wetland impact area, use the extra dotted lines to indicate each wetland type, and identify predominant vegetation and size of impacted area for each separate wetland type within that impact area; 5) If you do not have access to some of this information, call your LGU or SWCD office for assistance.  

(Photocopy chart for more impacts, if needed.)

**DESCRIPTION OF WETLAND IMPACTS**

<table>
<thead>
<tr>
<th>Wetland impact (as noted on overhead view)</th>
<th>Watershed name or number (if known)</th>
<th>Watershed and Bank Service Area</th>
<th>Wetland plant community type¹</th>
<th>Predominant vegetation in impacted wetland area</th>
<th>Size of area impacted (in acres or square feet)</th>
<th>Existing land use in project area (check all that apply)</th>
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</thead>
<tbody>
<tr>
<td>First impact</td>
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<td>Housing</td>
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<td>Commercial</td>
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<td>Industrial</td>
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<td>Parks/recreation areas</td>
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<td>Highways and associated rights-of-way</td>
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<td></td>
<td>Forested</td>
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<td>Farmsteads/agricultural</td>
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<td>Vacant lands</td>
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<td></td>
<td>Public and semi-public (schools/gov’t facilities)</td>
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<td>Airports</td>
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<td></td>
<td>Extractive (gravel pits/quarries)</td>
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<td></td>
<td>Other:</td>
</tr>
</tbody>
</table>

Second impact  

<table>
<thead>
<tr>
<th>Wetland plant community type: Shallow open water:</th>
<th>Deep marsh:</th>
<th>Shallow Marsh:</th>
<th>Sedge meadow:</th>
<th>Fresh wet meadow:</th>
<th>Wet to wet mesic prairie:</th>
<th>Calcareous fen:</th>
<th>Open bog or coniferous bog:</th>
<th>Shrub carr or alder thicket:</th>
<th>Hardwood swamp or coniferous swamp:</th>
<th>Floodplain forest</th>
<th>Seasonally flooded basin</th>
</tr>
</thead>
</table>

**TOTALS OF AREA(S) IMPACTED FOR EACH WETLAND TYPE ON CHART** (indicate acres [ ] or square feet [ ]):

<table>
<thead>
<tr>
<th>Wetland plant community type:</th>
<th>Shallow open water:</th>
<th>Deep marsh:</th>
<th>Shallow Marsh:</th>
<th>Sedge meadow:</th>
<th>Fresh wet meadow:</th>
<th>Wet to wet mesic prairie:</th>
<th>Calcareous fen:</th>
<th>Open bog or coniferous bog:</th>
<th>Shrub carr or alder thicket:</th>
<th>Hardwood swamp or coniferous swamp:</th>
<th>Floodplain forest</th>
<th>Seasonally flooded basin</th>
</tr>
</thead>
</table>

12. SPECIAL CONSIDERATIONS: Are you aware of any special considerations that apply to either the impact site(s) or the replacement site(s)?  

Yes [ ]  No [ ]

(Examples: the presence of endangered species, special fish and wildlife resources, sensitive surface waters, or waste disposal site.) If YES, list and describe briefly.

13. SHORELAND IMPACT ZONE: Please identify each wetland impact site noted in Section 15 that is within 1000 feet of a lake or 300 feet of a river.

¹ See *Wetland Plants and Plant Communities of Minnesota and Wisconsin* (Eggers and Reed, 1997) as modified by the Board of Water and Soil Resources, United States Army Corps of Engineers.
14. **HOW PROPOSED REPLACEMENT WILL BE ACCOMPLISHED:** Indicate how proposed replacement will be accomplished (check only one box below and continue as indicated):

- **A. Wetland banking credits only**
  Complete Application for Withdrawal of Wetland Credits Form and include with your application. Copies of this form are available from your LGU, or download a copy from www.bwsr.state.mn.us  
  Skip to Section 19, page 6 (You do not need to complete Sections 15-18).

- **B. Project-specific replacement only**
  Continue with Section 15 below.

- **C. A Combination of wetland banking and project-specific replacement.** If using project specific replacement that will result in surplus wetland credits that you propose to deposit in the state wetland bank for future use, then you must submit a wetland banking application directly to your LGU before or concurrently with submittal of this form. Also, Complete Application for Withdrawal of Wetland Credits Form and include with your application. Copies of this form and the wetland banking application are available from your LGU, or download a copy from www.bwsr.state.mn.us  
  Continue with Section 15 below.

15. **DESCRIPTION OF REPLACEMENT WETLAND(S) CONSTRUCTION** (Complete this section only if you marked Box B or Box C in Section 14 above):

Describe in detail how replacement wetland(s) will be constructed. If several methods will be used, describe each method. Details should include the following: 1) type of construction (such as excavated in upland, restored by tile break, restored by ditch block or revegetated); 2) type, size and specifications of outlet structures; 3) elevations relative to Mean Sea Level or established benchmarks or key features (such as sill, emergency overflow or structure height); 4) what best management practices will be implemented to prevent erosions or site degradation; 5) proposed timetable for starting and ending the project; and 6) a vegetation management plan. Write this description on a separate sheet of paper labeled DESCRIPTION OF REPLACEMENT WETLAND CONSTRUCTION.

16. **SURPLUS WETLAND CREDITS:** If using project-specific replacement (Box B or Box C in Section 14 above), will the replacement result in any surplus wetland credits that you wish to have deposited in the State Wetland Bank for future use?  □ Yes  □ No. If yes, submit a Wetland Banking Application directly to your LGU before or concurrently with submittal of this form. Copies are available from your LGU, or download a copy from www.bwsr.state.mn.us

17. **DESCRIPTION OF REPLACEMENT WETLANDS:** Complete the chart below: 1) Use one row of boxes for each wetland replacement site; 2) If your project has more than one wetland replacement site, reference your overhead view (part of Section 5) to this chart by identifying and labeling “first replacement site” and “second replacement site” on your overhead view; 3) If you are identifying only one wetland type within a given replacement site, use the first dotted line(s) and leave the others blank; 4) If you have chosen to identify more than one wetland type within a given replacement site, use the extra dotted lines to indicate each separate wetland type, and identify type(s) of replacement credits and “restored or created” for each separate wetland type with that replacement site; 5) If you do not have access to some of the information, or if you do not know your replacement ratio, call your LGU or SWCD office for assistance. Photocopy chart for more wetland replacements, if needed.

### DESCRIPTION OF REPLACEMENT WETLANDS

<table>
<thead>
<tr>
<th>Identify Wetland replacement site (as noted on overhead view)</th>
<th>Watershed name or number (if known)</th>
<th>County</th>
<th>Section, Township, Range</th>
<th>Wetland Plant Community Type</th>
<th>Type(s) of replacement credits (in acres or square feet)</th>
<th>Restored or created? Indicate R or C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of First replacement site</td>
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<tr>
<td>Name of Second replacement site</td>
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</tbody>
</table>

If you are identifying only one wetland type within a given wetland impact area, use the first dotted line and leave the others blank. If you have chosen to identify more than one wetland type within a given wetland impact area, use the extra dotted lines to indicate each separate wetland type, and identify predominant vegetation and size of impacted area for each separate wetland type within that impact area.

**Wetland plant community type:** Shallow open water: Deep marsh; Shallow Marsh: Sedge meadow; Fresh wet meadow: Wet to wet mesic prairie; Calcareous fen; Open bog or coniferous bog; Shrub carr or alder thicket; Hardwood swamp or coniferous swamp: Floodplain forest; Seasonally flooded basin

* See Wetland Plants and Plant Communities of Minnesota and Wisconsin (Eggers and Reed, 1997) as modified by the Board of Water and Soil Resources, United States Army Corps of Engineers.
18. ADDITIONAL INFORMATION REQUIRED FOR PROJECT-SPECIFIC REPLACEMENT (Required only if you marked Box B or Box C in Section 14): For projects involving at least some project-specific replacement, include the following additional information:

☐ Two drawings to scale of the replacement wetland. Include both overhead view and profile (side view or cross-sectional view). See What to Include on Plans (Instructions, Page 3) for a detailed description of what should be included in these drawings. Without drawings, your application will be considered incomplete.

☐ For created replacement wetlands, include additional soils information (if available) that indicates the capability of the site to produce and maintain wetland characteristics.

Note 1: For replacement wetlands located on pipeline easements, you need to receive endorsement of your project from both the easement holder and the Minnesota Department of Public Safety’s Office of Pipeline Safety. Before start of construction, the owner of any utilities must be notified. The landowner or contractor is responsible for giving this notice by calling “Gopher State One-Call” at 652–454-0002 (Twin Cities Metro Area) or 1-800-252-1166 (all other locations).

Note 2: For extensive or complex projects supplementary information may be requested at a later date from one or more of the responding agencies. Such information may include (but not be limited to) the following: topographic map, water table map, soil borings, depth soundings, aerial photographs, environmental assessment and/or engineering reports.

19. SIGNED AFFIRMATION:

FOR PROJECTS INVOLVING REPLACEMENT BY WETLAND BANKING ONLY. To the best of my knowledge and belief, all information in Part II is true, complete and accurate; and I affirm that the wetland losses will be replaced via withdrawal from an account in the State Wetland Bank.

FOR PROJECTS INVOLVING EITHER PROJECT-SPECIFIC REPLACEMENT ONLY OR A COMBINATION OF WETLAND BANKING AND PROJECT-SPECIFIC REPLACEMENT:

Part A: The replacement wetland. I affirm that the replacement wetland was not:
Previously restored or created under a prior approved replacement plan or permit; AND
Drained or filled under an exemption during the previous 10 years; AND
Restored with financial assistance from public conservation programs; AND
Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration; and
the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.

Part B: Additional assurances (check all that apply):
☐ The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
☐ An irrevocable bank letter of credit, performance bond, or other acceptable security has been provided to guarantee successful completion of the wetland replacement.
☐ The wetland losses will be replaced via withdrawal from an account in the State Wetland Bank.

Part C. For projects involving any project-specific replacement: Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located; and I will at the same time submit proof of such recording to the LGU.

To the best of my knowledge and belief, all information in Part II is true, complete and accurate; and I affirm all statements in Part A and C, as well as checked assurance(s) in Part B.

________________________  __________________________
Signature or applicant or agent  Date

FOR LGU USE ONLY

Replacement plan is (check one): ☐ Approved  ☐ Approved with conditions (conditions attached)  ☐ Denied

________________________  __________________________
LGU official signature  Date

LGU has receive evidence of title and proof of recording of Declaration of Restrictions and Covenants for Replacement Wetland:

________________________  __________________________
County where recorded  Date  Document # assigned by recorder

________________________  __________________________
LGU official signature  Date

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standards. The DA permit or instrument must clearly specify the conditions under which the financial assurances are to be released to the permittee, sponsor, and/or other financial assurance provider, including, as appropriate, linkage to achievement of performance standards, adaptive management, or compliance with special conditions.

(5) A financial assurance must be in a form that ensures that the district engineer will receive notification at least 120 days in advance of any termination or revocation. For third-party assurance providers, this may take the form of a contractual requirement for the assurance provider to notify the district engineer at least 120 days before the assurance is revoked or terminated.

(6) Financial assurances shall be payable at the direction of the district engineer to his designee or to a standby trust agreement. When a standby trust is used (e.g., with performance bonds or letters of credit) all amounts paid by the financial assurance provider shall be deposited directly into the standby trust fund for distribution by the trustee in accordance with the district engineer’s instructions.

(o) Compliance with applicable law. The compensatory mitigation project must comply with all applicable federal, state, and local laws. The DA permit, mitigation banking instrument, or in-lieu fee program instrument must not require participation by the Corps or any other federal agency in project management, including receipt or management of financial assurances or long-term financing mechanisms, except as determined by the Corps or other agency to be consistent with its statutory authority, mission, and priorities.

§ 332.4 Planning and documentation.

(a) Pre-application consultations. Potential applicants for standard permits are encouraged to participate in pre-application meetings with the Corps and appropriate agencies to discuss potential mitigation requirements and information needs.

(b) Public review and comment. (1) For an activity that requires a standard DA permit pursuant to section 404 of the Clean Water Act, the public notice for the proposed activity must contain a statement explaining how impacts associated with the proposed activity are to be avoided, minimized, and compensated for. This explanation shall address, to the extent that such information is provided in the mitigation statement required by §325.1(d)(7) of this chapter, the proposed avoidance and minimization and the amount, type, and location of any proposed compensatory mitigation, including any out-of-kind compensation, or indicate an intention to use an approved mitigation bank or in-lieu fee program. The level of detail provided in the public notice must be commensurate with the scope and scale of the impacts. The notice shall not include information that the district engineer and the permittee believe should be kept confidential for business purposes, such as the exact location of a proposed mitigation site that has not yet been secured. The permittee must clearly identify any information being claimed as confidential in the mitigation statement when submitted. In such cases, the notice must still provide enough information to enable the public to provide meaningful comment on the proposed mitigation.

(2) For individual permits, district engineers must consider any timely comments and recommendations from other federal agencies; tribal, state, or local governments; and the public.

(3) For activities authorized by letters of permission or general permits, the review and approval process for compensatory mitigation proposals and plans must be conducted in accordance with the terms and conditions of those permits and applicable regulations including the applicable provisions of this part.

(c) Mitigation plan—(1) Preparation and approval. (i) For individual permits, the permittee must prepare a draft mitigation plan and submit it to the district engineer for review. After addressing any comments provided by the district engineer, the permittee must prepare a final mitigation plan, which must be approved by the district engineer prior to issuing the individual permit. The approved final mitigation
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plan must be incorporated into the individual permit by reference. The final mitigation plan must include the items described in paragraphs (c)(2) through (c)(14) of this section, but the level of detail of the mitigation plan should be commensurate with the scale and scope of the impacts. As an alternative, the district engineer may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as permit conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and the name of the specific mitigation bank or in-lieu fee program to be used.

(ii) For general permits, if compensatory mitigation is required, the district engineer may approve a conceptual or detailed compensatory mitigation plan to meet required time frames for general permit verifications, but a final mitigation plan incorporating the elements in paragraphs (c)(2) through (c)(14) of this section, at a level of detail commensurate with the scale and scope of the impacts, must be approved by the district engineer before the permittee commences work in waters of the United States. As an alternative, the district engineer may determine that it would be more appropriate to address any of the items described in paragraphs (c)(2) through (c)(14) of this section as permit conditions, instead of components of a compensatory mitigation plan. For permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks or in-lieu fee programs, their mitigation plans need include only the items described in paragraphs (c)(5) and (c)(6) of this section, and the name of the specific mitigation bank or in-lieu fee program to be used.

(iii) Mitigation banks and in-lieu fee programs must prepare a mitigation plan including the items in paragraphs (c)(2) through (c)(14) of this section for each separate compensatory mitigation project site. For mitigation banks and in-lieu fee programs, the preparation and approval process for mitigation plans is described in § 332.8.

(2) Objectives. A description of the resource type(s) and amount(s) that will be provided, the method of compensation (i.e., restoration, establishment, enhancement, and/or preservation), and the manner in which the resource functions of the compensatory mitigation project will address the needs of the watershed, ecoregion, physiographic province, or other geographic area of interest.

(3) Site selection. A description of the factors considered during the site selection process. This should include consideration of watershed needs, on-site alternatives where applicable, and the practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the compensatory mitigation project site. (See § 332.3(d).)

(4) Site protection instrument. A description of the legal arrangements and instrument, including site ownership, that will be used to ensure the long-term protection of the compensatory mitigation project site (see § 332.7(a)).

(5) Baseline information. A description of the ecological characteristics of the proposed compensatory mitigation project site and, in the case of an application for a DA permit, the impact site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate to the type of resource proposed as compensation. The baseline information should also include a delineation of waters of the United States on the proposed compensatory mitigation project site. A prospective permittee planning to secure credits from an approved mitigation bank or in-lieu fee program only needs to provide baseline information about
the impact site, not the mitigation
bank or in-lieu fee project site.

(6) Determination of credits. A descrip-
tion of the number of credits to be pro-
vided, including a brief explanation of the rationale for this determination.
(See §332.3(f).)
(i) For permittee-responsible miti-
gation, this should include an expla-
nation of how the compensatory miti-
gation project will provide the required compensation for unavoidable impacts
to aquatic resources resulting from the
permitted activity.
(ii) For permittees intending to se-
cure credits from an approved mitiga-
tion bank or in-lieu fee program, it
should include the number and re-
source type of credits to be secured and
how these were determined.

(7) Mitigation work plan. Detailed
written specifications and work de-
scriptions for the compensatory miti-
gation project, including, but not lim-
ited to, the geographic boundaries of
the project; construction methods, tim-
ing, and sequence; source(s) of water,
including connections to existing
waters and uplands; methods for estab-
lishing the desired plant community;
plans to control invasive plant species;
the proposed grading plan, including
elevations and slopes of the substrate;
soil management; and erosion control
measures. For stream compensatory
mitigation projects, the mitigation
work plan may also include other rel-
vant information, such as planform
geometry, channel form (e.g., typical
channel cross-sections), watershed size,
design discharge, and riparian area
plantings.

(8) Maintenance plan. A description
and schedule of maintenance require-
ments to ensure the continued viability
of the resource once initial con-
struction is completed.

(9) Performance standards. Eco-
logically-based standards that will be
used to determine whether the compen-
satory mitigation project is achieving
its objectives. (See §332.5.)

(10) Monitoring requirements. A de-
scription of parameters to be moni-
tored in order to determine if the com-
pen-satory mitigation project is on
track to meet performance standards
and if adaptive management is needed.
A schedule for monitoring and report-
ing on monitoring results to the dis-
trict engineer must be included. (See
§332.6.)

(11) Long-term management plan. A de-
scription of how the compensatory
mitigation project will be managed
after performance standards have been
achieved to ensure the long-term sus-
tainability of the resource, including
long-term financing mechanisms and
the party responsible for long-term
management. (See §332.7(d).)

(12) Adaptive management plan. A
management strategy to address un-
foreseen changes in site conditions or
other components of the compensatory
mitigation project, including the party
or parties responsible for implementing
adaptive management measures. The
adaptive management plan will guide
decisions for revising compensatory
mitigation plans and implementing
measures to address both foreseeable
and unforeseen circumstances that ad-
versely affect compensatory mitigation
success. (See §332.7(c).)

(13) Financial assurances. A descrip-
tion of financial assurances that will
be provided and how they are sufficient
to ensure a high level of confidence
that the compensatory mitigation
project will be successfully completed,
in accordance with its performance
standards (see §332.3(n)).

(14) Other information. The district
engineer may require additional infor-
mation as necessary to determine the
appropriateness, feasibility, and prac-
ticability of the compensatory mitiga-
tion project.

§ 332.5 Ecological performance stand-
ards.

(a) The approved mitigation plan
must contain performance standards
that will be used to assess whether the
project is achieving its objectives. Per-
formance standards should relate to
the objectives of the compensatory
mitigation project, so that the project
can be objectively evaluated to deter-
mine if it is developing into the desired
resource type, providing the expected
functions, and attaining any other ap-
plicable metrics (e.g., acres).

(b) Performance standards must be
based on attributes that are objective
and verifiable. Ecological performance
standards must be based on the best
available science that can be measured or assessed in a practicable manner. Performance standards may be based on variables or measures of functional capacity described in functional assessment methodologies, measurements of hydrology or other aquatic resource characteristics, and/or comparisons to reference aquatic resources of similar type and landscape position. The use of reference aquatic resources to establish performance standards will help ensure that those performance standards are reasonably achievable, by reflecting the range of variability exhibited by the regional class of aquatic resources as a result of natural processes and anthropogenic disturbances. Performance standards based on measurements of hydrology should take into consideration the hydrologic variability exhibited by reference aquatic resources, especially wetlands. Where practicable, performance standards should take into account the expected stages of the aquatic resource development process, in order to allow early identification of potential problems and appropriate adaptive management.

§ 332.6 Monitoring.

(a) General. (1) Monitoring the compensatory mitigation project site is necessary to determine if the project is meeting its performance standards, and to determine if measures are necessary to ensure that the compensatory mitigation project is accomplishing its objectives. The submission of monitoring reports to assess the development and condition of the compensatory mitigation project is required, but the content and level of detail for those monitoring reports must be commensurate with the scale and scope of the compensatory mitigation project, as well as the compensatory mitigation project type. The mitigation plan must address the monitoring requirements for the compensatory mitigation project, including the parameters to be monitored, the length of the monitoring period, the party responsible for conducting the monitoring, the frequency for submitting monitoring reports to the district engineer, and the party responsible for submitting those monitoring reports to the district engineer.

(2) The district engineer may conduct site inspections on a regular basis (e.g., annually) during the monitoring period to evaluate mitigation site performance.

(b) Monitoring period. The mitigation plan must provide for a monitoring period that is sufficient to demonstrate that the compensatory mitigation project has met performance standards, but not less than five years. A longer monitoring period must be required for aquatic resources with slow development rates (e.g., forested wetlands, bogs). Following project implementation, the district engineer may reduce or waive the remaining monitoring requirements upon a determination that the compensatory mitigation project has achieved its performance standards. Conversely the district engineer may extend the original monitoring period upon a determination that performance standards have not been met or the compensatory mitigation project is not on track to meet them. The district engineer may also revise monitoring requirements when remediation and/or adaptive management is required.

(c) Monitoring reports. (1) The district engineer must determine the information to be included in monitoring reports. This information must be sufficient for the district engineer to determine how the compensatory mitigation project is progressing towards meeting its performance standards, and may include plans (such as as-built plans), maps, and photographs to illustrate site conditions. Monitoring reports may also include the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.

(2) The permittee or sponsor is responsible for submitting monitoring reports in accordance with the special conditions of the DA permit or the terms of the instrument. Failure to submit monitoring reports in a timely manner may result in compliance action by the district engineer.

(3) Monitoring reports must be provided by the district engineer to interested federal, tribal, state, and local
§ 332.7 Management.

(a) Site protection. (1) The aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation project must be provided long-term protection through real estate instruments or other available mechanisms, as appropriate. Long-term protection may be provided through real estate instruments such as conservation easements held by entities such as federal, tribal, state, or local resource agencies, non-profit conservation organizations, or private land managers; the transfer of title to such entities; or by restrictive covenants. For government property, long-term protection may be provided through federal facility management plans or integrated natural resources management plans. When approving a method for long-term protection of non-government property other than transfer of title, the district engineer shall consider relevant legal constraints on the use of conservation easements and/or restrictive covenants in determining whether such mechanisms provide sufficient site protection. To provide sufficient site protection, a conservation easement or restrictive covenant should, where practicable, establish in an appropriate third party (e.g., governmental or non-profit resource management agency) the right to enforce site protections and provide the third party the resources necessary to monitor and enforce these site protections.

(2) The real estate instrument, management plan, or other mechanism providing long-term protection of the compensatory mitigation site must, to the extent appropriate and practicable, prohibit incompatible uses (e.g., clear cutting or mineral extraction) that might otherwise jeopardize the objectives of the compensatory mitigation project. Where appropriate, multiple instruments recognizing compatible uses (e.g., fishing or grazing rights) may be used.

(3) The real estate instrument, management plan, or other long-term protection mechanism must contain a provision requiring 60-day advance notification to the district engineer before any action is taken to void or modify the instrument, management plan, or long-term protection mechanism, including transfer of title to, or establishment of any other legal claims over, the compensatory mitigation site.

(4) For compensatory mitigation projects on public lands, where federal facility management plans or integrated natural resources management plans are used to provide long-term protection, and changes in statute, regulation, or agency needs or mission results in an incompatible use on public lands originally set aside for compensatory mitigation, the public agency authorizing the incompatible use is responsible for providing alternative compensatory mitigation that is acceptable to the district engineer for any loss in functions resulting from the incompatible use.

(5) A real estate instrument, management plan, or other long-term protection mechanism used for site protection of permittee-responsible mitigation must be approved by the district engineer in advance of, or concurrent with, the activity causing the authorized impacts.

(b) Sustainability. Compensatory mitigation projects shall be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context will support long-term sustainability. Where active long-term management and maintenance are necessary to ensure long-term sustainability (e.g., prescribed burning, invasive species control, maintenance of water control structures, easement enforcement), the responsible party must provide for such management and maintenance. This includes the provision of long-term financing mechanisms where necessary. Where needed, the acquisition and protection of water rights must be secured and documented in the permit conditions or instrument.

(c) Adaptive management. (1) If the compensatory mitigation project cannot be constructed in accordance with
in §230.61 (Evaluation and Testing), may be required to provide information on the effect of the discharge material on communities or populations of organisms expected to be exposed to it.

(f) Proposed disposal site determinations. (1) Each disposal site shall be specified through the application of these Guidelines. The mixing zone shall be confined to the smallest practicable zone within each specified disposal site that is consistent with the type of dispersion determined to be appropriate by the application of these Guidelines. In a few special cases under unique environmental conditions, where there is adequate justification to show that widespread dispersion by natural means will result in no significantly adverse environmental effects, the discharged material may be intended to be spread naturally in a very thin layer over a large area of the substrate rather than be contained within the disposal site.

(2) The permitting authority and the Regional Administrator shall consider the following factors in determining the acceptability of a proposed mixing zone:

(i) Depth of water at the disposal site;
(ii) Current velocity, direction, and variability at the disposal site;
(iii) Degree of turbulence;
(iv) Stratification attributable to causes such as obstructions, salinity or density profiles at the disposal site;
(v) Discharge vessel speed and direction, if appropriate;
(vi) Rate of discharge;
(vii) Ambient concentration of constituents of interest;
(viii) Dredged material characteristics, particularly concentrations of constituents, amount of material, type of material (sand, silt, clay, etc.) and settling velocities;
(ix) Number of discharge actions per unit of time;
(x) Other factors of the disposal site that affect the rates and patterns of mixing.

(g) Determination of cumulative effects on the aquatic ecosystem. (1) Cumulative impacts are the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems.

(2) Cumulative effects attributable to the discharge of dredged or fill material in waters of the United States should be predicted to the extent reasonable and practical. The permitting authority shall collect information and solicit information from other sources about the cumulative impacts on the aquatic ecosystem. This information shall be documented and considered during the decision-making process concerning the evaluation of individual permit applications, the issuance of a General permit, and monitoring and enforcement of existing permits.

(h) Determination of secondary effects on the aquatic ecosystem. (1) Secondary effects are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities.

(2) Some examples of secondary effects on an aquatic ecosystem are fluctuating water levels in an impoundment and downstream associated with the operation of a dam, septic tank leaching and surface runoff from residential or commercial developments on fill, and leachate and runoff from a sanitary landfill located in waters of the United States. Activities to be conducted on fast land created by the discharge of dredged or fill material in waters of the United States may have secondary impacts within those waters which should be considered in evaluating the impact of creating those fast lands.

§230.12 Findings of compliance or non-compliance with the restrictions on discharge.

(a) On the basis of these Guidelines (subparts C through G) the proposed disposal sites for the discharge of dredged or fill material must be:
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1. Specified as complying with the requirements of these Guidelines; or
2. Specified as complying with the requirements of these Guidelines with the inclusion of appropriate and practicable discharge conditions (see subparts H and J) to minimize pollution or adverse effects to the affected aquatic ecosystems; or
3. Specified as failing to comply with the requirements of these Guidelines where:
   (i) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as such alternative does not have other significant adverse environmental consequences; or
   (ii) The proposed discharge will result in significant degradation of the aquatic ecosystem under §230.10(b) or (c); or
   (iii) The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem; or
   (iv) There does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with these Guidelines.

(b) Findings under this section shall be set forth in writing by the permitting authority for each proposed discharge and made available to the permit applicant. These findings shall include the factual determinations required by §230.11, and a brief explanation of any adaptation of these Guidelines to the activity under consideration. In the case of a General permit, such findings shall be prepared at the time of issuance of that permit rather than for each subsequent discharge under the authority of that permit.

§ 230.20 Substrate.

(a) The substrate of the aquatic ecosystem underlies open waters of the United States and constitutes the surface of wetlands. It consists of organic and inorganic solid materials and includes water and other liquids or gases that fill the spaces between solid particles.

(b) Possible loss of environmental characteristics and values: The discharge of dredged or fill material can result in varying degrees of change in the complex physical, chemical, and biological characteristics of the substrate. Discharges which alter substrate elevation or contours can result in changes in water circulation, depth, current pattern, water fluctuation and water temperature. Discharges may adversely affect bottom-dwelling organisms at the site by smothering immobile forms or forcing mobile forms to migrate. Benthic forms present prior to a discharge are unlikely to recolonize on the discharged material if it is very dissimilar from that of the discharge site. Erosion, slumping, or lateral displacement of surrounding bottom of such deposits can adversely affect areas of the substrate outside the perimeters of the disposal site by changing or destroying habitat. The bulk and composition of the discharged material and the location, method, and timing of discharges may all influence the degree of impact on the substrate.

§ 230.21 Suspended particulates/turbidity.

(a) Suspended particulates in the aquatic ecosystem consist of fine-grained mineral particles, usually smaller than silt, and organic particles. Suspended particulates may enter water bodies as a result of land runoff, flooding, vegetative and planktonic breakdown, resuspension of bottom sediments, and man’s activities including dredging and filling. Particulates may remain suspended in the water column for variable periods of time as a result of such factors as agitation of the water mass, particulate specific gravity, particle shape, and physical and chemical properties of particle surfaces.

NOTE: The effects described in this subpart should be considered in making the factual determinations and the findings of compliance or non-compliance in subpart B.

of their values, and the possible loss of these values due to discharges of dredged or fill material. Subpart G prescribes a number of physical, chemical, and biological evaluations and testing procedures to be used in reaching the required factual determinations. Subpart H details the means to prevent or minimize adverse effects. Subpart I concerns advanced identification of disposal areas.

§ 230.5 General procedures to be followed.

In evaluating whether a particular discharge site may be specified, the permitting authority should use these Guidelines in the following sequence:

(a) In order to obtain an overview of the principal regulatory provisions of the Guidelines, review the restrictions on discharge in §230.10(a) through (d), the measures to minimize adverse impact of subpart H, and the required factual determinations of §230.11.

(b) Determine if a General permit (§230.7) is applicable; if so, the applicant needs merely to comply with its terms, and no further action by the permitting authority is necessary. Special conditions for evaluation of proposed General permits are contained in §230.7. If the discharge is not covered by a General permit:

(c) Examine practicable alternatives to the proposed discharge, that is, not discharging into the waters of the U.S. or discharging into an alternative aquatic site with potentially less damaging consequences (§230.10(a)).

(d) Delineate the candidate disposal site consistent with the criteria and evaluations of §230.11(f).

(e) Evaluate the various physical and chemical components which characterize the non-living environment of the candidate site, the substrate and the water including its dynamic characteristics (subpart C).

(f) Identify and evaluate any special or critical characteristics of the candidate disposal site, and surrounding areas which might be affected by use of such site, related to their living communities or human uses (subparts D, E, and F).

(g) Review Factual Determinations in §230.11 to determine whether the information in the project file is sufficient to provide the documentation required by §230.11 or to perform the pre-testing evaluation described in §230.60, or other information is necessary.

(h) Evaluate the material to be discharged to determine the possibility of chemical contamination or physical incompatibility of the material to be discharged (§230.60).

(i) If there is a reasonable probability of chemical contamination, conduct the appropriate tests according to the section on Evaluation and Testing (§230.61).

(j) Identify appropriate and practicable changes to the project plan to minimize the environmental impact of the discharge, based upon the specialized methods of minimization of impacts in subpart H.

(k) Make and document Factual Determinations in §230.11.

(l) Make and document Findings of Compliance (§230.12) by comparing Factual Determinations with the requirements for discharge of §230.10.

This outline of the steps to follow in using the Guidelines is simplified for purposes of illustration. The actual process followed may be iterative, with the results of one step leading to a re-examination of previous steps. The permitting authority must address all of the relevant provisions of the Guidelines in reaching a Finding of Compliance in an individual case.

§ 230.6 Adaptability.

(a) The manner in which these Guidelines are used depends on the physical, biological, and chemical nature of the proposed extraction site, the material to be discharged, and the candidate disposal site, including any other important components of the ecosystem being evaluated. Documentation to demonstrate knowledge about the extraction site, materials to be extracted, and the candidate disposal site is an essential component of guideline application. These Guidelines allow evaluation and documentation for a variety of activities, ranging from those with large, complex impacts on the aquatic environment to those for which the impact is likely to be innocuous. It is unlikely that the Guidelines will apply in their entirety to any one activity, no matter how complex. It is
(C) A 401 certification has been issued or waived and, if appropriate, CZM consistency concurrence obtained or presumed either on a generic or individual basis.

(2) Regional permits. Regional permits are a type of general permit as defined in 33 CFR 322.2(f) and 33 CFR 323.2(n). They may be issued by a division or district engineer after compliance with the other procedures of this regulation. After a regional permit has been issued, individual activities falling within those categories that are authorized by such regional permits do not have to be further authorized by the procedures of this regulation. The issuing authority will determine and add appropriate conditions to protect the public interest. When the issuing authority determines on a case-by-case basis that the concerns for the aquatic environment so indicate, he may exercise discretionary authority to override the regional permit and require an individual application and review. A regional permit may be revoked by the issuing authority if it is contrary to the public interest provided the procedures of §325.7 of this part are followed. Following revocation, applications for future activities in areas covered by the regional permit shall be processed as applications for individual permits. No regional permit shall be issued for a period of more than five years.

(3) Joint procedures. Division and district engineers are authorized and encouraged to develop joint procedures with states and other Federal agencies with ongoing permit programs for activities also regulated by the Department of the Army. Such procedures may be substituted for the procedures in paragraphs (a)(1) through (a)(5) of this section provided that the substantive requirements of those sections are maintained. Division and district engineers are also encouraged to develop management techniques such as joint agency review meetings to expedite the decision-making process. However, in doing so, the applicant’s rights to a full public interest review and independent decision by the district or division engineer must be strictly observed.

(4) Emergency procedures. Division engineers are authorized to approve special processing procedures in emergency situations. An “emergency” is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures. In emergency situations, the district engineer will explain the circumstances and recommend special procedures to the division engineer who will instruct the district engineer as to further processing of the application. Even in an emergency situation, reasonable efforts will be made to receive comments from interested Federal, state, and local agencies and the affected public. Also, notice of any special procedures authorized and their rationale is to be appropriately published as soon as practicable.

to generate meaningful comments, including a description of the type of structures, if any, to be erected on fills or pile or float-supported platforms, and a description of the type, composition, and quantity of materials to be discharged or disposed of in the ocean;

(6) A plan and elevation drawing showing the general and specific site location and character of all proposed activities, including the size relationship of the proposed structures to the size of the impacted waterway and depth of water in the area;

(7) If the proposed activity would occur in the territorial seas or ocean waters, a description of the activity's relationship to the baseline from which the territorial sea is measured;

(8) A list of other government authorizations obtained or requested by the applicant, including required certifications relative to water quality, coastal zone management, or marine sanctuaries;

(9) If appropriate, a statement that the activity is a categorical exclusion for purposes of NEPA (see paragraph 7 of Appendix B to 33 CFR part 230);

(10) A statement of the district engineer's current knowledge on historic properties;

(11) A statement of the district engineer's current knowledge on endangered species (see §325.2(b)(5));

(12) A statement(s) on evaluation factors (see §325.3(c));

(13) Any other available information which may assist interested parties in evaluating the likely impact of the proposed activity, if any, on factors affecting the public interest;

(14) The comment period based on §325.2(d)(2);

(15) A statement that any person may request, in writing, within the comment period specified in the notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing;

(16) For non-federal applications in states with an approved CZM Plan, a statement on compliance with the approved Plan; and

(17) In addition, for section 103 (ocean dumping) activities:

(i) The specific location of the proposed disposal site and its physical boundaries;

(ii) A statement as to whether the proposed disposal site has been designated for use by the Administrator, EPA, pursuant to section 102(c) of the Act;

(iii) If the proposed disposal site has not been designated by the Administrator, EPA, a description of the characteristics of the proposed disposal site and an explanation as to why no previously designated disposal site is feasible;

(iv) A brief description of known dredged material discharges at the proposed disposal site;

(v) Existence and documented effects of other authorized disposals that have been made in the disposal area (e.g., heavy metal background reading and organic carbon content);

(vi) An estimate of the length of time during which disposal would continue at the proposed site; and

(vii) Information on the characteristics and composition of the dredged material.

(b) Public notice for general permits. District engineers will publish a public notice for all proposed regional general permits and for significant modifications to, or reissuance of, existing regional permits within their area of jurisdiction. Public notices for statewide regional permits may be issued jointly by the affected Corps districts. The notice will include all applicable information necessary to provide a clear understanding of the proposal. In addition, the notice will state the availability of information at the district office which reveals the Corps' provisional determination that the proposed activities comply with the requirements for issuance of general permits. District engineers will publish a public notice for nationwide permits in accordance with 33 CFR 330.4.

(c) Evaluation factors. A paragraph describing the various evaluation factors on which decisions are based shall be included in every public notice.

(1) Except as provided in paragraph (c)(3) of this section, the following will be included:
'The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floating in post offices or other appropriate public places in the vicinity of the site of the proposed work and will be sent to the applicant, to appropriate city and county officials, to adjoining property owners, to appropriate state agencies, to appropriate Indian Tribes or tribal representatives, to concerned Federal agencies, to local, regional and national shipping and other concerned business and conservation organizations, to appropriate River Basin Commissions, to appropriate state and areawide clearing houses as prescribed by OMB Circular A-35, to local news media and to any other interested party. Copies of public notices will be sent to all parties who have specifically requested copies of public notices, to the U.S. Senators and Representatives for the area where the work is to be performed, the field representative of the Secretary of the Interior, the Regional Director of the Fish and Wildlife Service, the Regional Director of the National Park Service, the Regional Administrator of the Environmental Protection Agency (EPA), the Regional Director of the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration (NOAA), the head of the state agency responsible for fish and wildlife resources, the State Historic Preservation Officer, and the District Commander, U.S. Coast Guard.

(2) In addition to the general distribution of public notices cited above, notices will be sent to other addressees in appropriate cases as follows:
(i) If the activity would involve structures or dredging along the shores of the seas or Great Lakes, to the Coastal Engineering Research Center, Washington, DC 20016.
(ii) If the activity would involve construction of fixed structures or artificial islands on the outer continental shelf or in the territorial seas, to the Assistant Secretary of Defense (Manpower, Installations, and Logistics (ASD(MI&L)), Washington, DC 20310; the Director, Defense Mapping Agency (Hydrographic Center) Washington, DC 20390, Attention, Code NS12; and the National Ocean Service, Office of Coast Survey, N/C/S/261, 1315 East West Highway, Silver Spring, Maryland 20910-3382, and to affected military installations and activities.
(iii) If the activity involves the construction of structures to enhance fish propagation (e.g., fishing reefs) along the coasts of the United States, to the Director, Office of Marine Recreational Fisheries, National Marine Fisheries Service, Washington, DC 20235.
Corps of Engineers, Dept. of the Army, DoD § 325.5

(iv) If the activity involves the construction of structures which may affect aircraft operations or for purposes associated with seaplane operations, to the Regional Director of the Federal Aviation Administration.

(v) If the activity would be in connection with a foreign-trade zone, to the Executive Secretary, Foreign-Trade Zones Board, Department of Commerce, Washington, DC 20230 and to the appropriate District Director of Customs as Resident Representative, Foreign-Trade Zones Board.

(3) It is presumed that all interested parties and agencies will wish to respond to public notices; therefore, a lack of response will be interpreted as meaning that there is no objection to the proposed project. A copy of the public notice with the list of the addresses to whom the notice was sent will be included in the record. If a question develops with respect to an activity for which another agency has responsibility and that other agency has not responded to the public notice, the district engineer may request its comments. Whenever a response to a public notice has been received from a member of Congress, either in behalf of a constituent or himself, the district engineer will inform the member of Congress of the final decision.

(4) District engineers will update public notice mailing lists at least once every two years.

§ 325.4 Conditioning of permits.

(a) District engineers will add special conditions to Department of the Army permits when such conditions are necessary to satisfy legal requirements or to otherwise satisfy the public interest requirement. Permit conditions will be directly related to the impacts of the proposal, appropriate to the scope and degree of those impacts, and reasonably enforceable.

(1) Legal requirements which may be satisfied by means of Corps permit conditions include compliance with the 404(b)(1) guidelines, the EPA ocean dumping criteria, the Endangered Species Act, and requirements imposed by conditions on state section 401 water quality certifications.

(2) Where appropriate, the district engineer may take into account the existence of controls imposed under other federal, state, or local programs which would achieve the objective of the desired condition, or the existence of an enforceable agreement between the applicant and another party concerned with the resource in question, in determining whether a proposal complies with the 404(b)(1) guidelines, ocean dumping criteria, and other applicable statutes, and is not contrary to the public interest. In such cases, the Department of the Army permit will be conditioned to state that material changes in, or a failure to implement and enforce such program or agreement, will be grounds for modifying, suspending, or revoking the permit.

(3) Such conditions may be accomplished on-site, or may be accomplished off-site for mitigation of significant losses which are specifically identifiable, reasonably likely to occur, and of importance to the human or aquatic environment.

(b) District engineers are authorized to add special conditions, exclusive of paragraph (a) of this section, at the applicant’s request or to clarify the permit application.

(c) If the district engineer determines that special conditions are necessary to insure the proposal will not be contrary to the public interest, but those conditions would not be reasonably implementable or enforceable, he will deny the permit.

(d) Bonds. If the district engineer has reason to consider that the permittee might be prevented from completing work which is necessary to protect the public interest, he may require the permittee to post a bond of sufficient amount to indemnify the government against any loss as a result of corrective action it might take.

§ 325.5 Forms of permits.

(a) General discussion. (1) DA permits under this regulation will be in the form of individual permits or general permits. The basic format shall be ENG Form 1721, DA Permit (Appendix A).

(2) The general conditions included in ENG Form 1721 are normally applicable to all permits; however, some conditions may not apply to certain permits and may be deleted by the issuing officer. Special conditions applicable to
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Official Notices

Minnesota Pollution Control Agency
Municipal Division
REQUEST FOR COMMENTS on Planned Amendment to Rules Governing the Non-Degradation of Minnesota Waters, Minnesota Rules, Chapter 7050

Subject of Rules. Subject of Rules. The Minnesota Pollution Control Agency (Agency) requests comments on its planned amendment to rules governing the non-degradation criteria that affect the quality of Minnesota’s waters. The Agency is considering amendments to its rules to reflect changes that have occurred since the existing rules were adopted and to address the effect of stormwater discharges. The MPCA may also in this rulemaking consider state consistency with federal anti-degradation policies as identified by U.S. Environmental Protection Agency. The Agency is initiating this rulemaking by seeking comment from parties who have information or an interest in Minnesota’s waters.

Persons Affected. The planned amendments to the rules will affect the owners and operators of all facilities that discharge to Minnesota waters and the citizens of Minnesota who will be affected by those discharges.

Statutory Authority. Minnesota Statutes § 115.03, subd. 1(e) authorizes the Agency to adopt… rules, …under such conditions as it may prescribe, in order to prevent, control or abate water pollution, or for the installation or operation of disposal systems or parts thereof, or for other equipment and facilities.

Public Comment. Interested persons or groups may submit comments or information on these planned rule amendments until 4:30 p.m. on April 30, 2007. The Agency does not contemplate appointing an advisory committee to comment on the planned amendments to the rules. If you are interested in being notified when the amendments to the rules are published for comment, please contact Carol Nankivel at the number or address below.

Rules Drafts. The Agency has not yet prepared a draft of the planned rule amendments, although interested parties may request to be notified when a draft is available by contacting Carol Nankivel at the number or address below.

Agency Contact Person. Written or oral comments, questions or requests to receive a draft of the rules when it has been prepared, and requests for more information on these planned rule amendments should be directed to:

Carol Nankivel
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55055-4194
Telephone: (651) 297-8371 or TTY: (651) 282-5332
E-mail: carol.nankivel@pca.state.mn.us

Alternative Format. Upon request, this Request for Comments can be made available in an alternative format, such as large print, Braille, or cassette tape. To make such a request, please contact the agency contact person at the address or telephone number listed above.

NOTE: Comments received in response to this notice will not necessarily be included in the formal rulemaking record submitted to the administrative law judge when a proceeding to adopt rules is started. The agency is required to submit to the judge only those written comments received in response to the rules after they are proposed. If you submitted comments during the development of the rules and you want to ensure that the Administrative Law Judge reviews the comments, you should resubmit the comments after the rules are formally proposed.

Department of Public Safety
Bureau of Criminal Apprehension – CriMNet and CJIS
Adoption of the National Information Exchange Model (NIEM) for XML Exchanges

The CriMNet Program Office and Criminal Justice Information Systems (CJIS) units at the Bureau of Criminal Apprehension (BCA) have adopted the National Information Exchange Model (NIEM) for XML exchanges. More information about the model is available at http://www.niem.gov. The NIEM standard includes criminal justice information (covered in the global justice model) and other areas of government such as emergency management and homeland security, so it provides a broader range of exchanges. New XML documents from the BCA will conform to the NIEM standard. Reference schema and the data dictionary are currently available in the BCA's Criminal Justice Information Repository at: https://cjjis.crimnet.state.mn.us/. CriMNet releases standards recommendations for 90-day vetting cycles beginning the first day of January, April, July and October of each year. The fourth quarter 2006 vetting period ended Dec. 31, and the first quarter 2007 vetting period will remain open until March 31, 2007. Visit the integration repository to view recommendations and provide feedback to assure the recommendations are suitable for each agency. For more information, contact the CriMNet Office at (651) 793-2726 or crimnet.support@state.mn.us.
Minnesota Pollution Control Agency
Municipal Division
REQUEST FOR COMMENTS on Planned Amendment to Rules Governing the Nondegradation of Minnesota Waters, Minnesota Rules, Chapter 7050

Subject of Rules. The Minnesota Pollution Control Agency (Agency) is extending its request for comments on its planned amendment to rules governing the nondegradation criteria that affect the quality of Minnesota's waters. The Agency published a Request for Comments in the January 29, 2007 State Register. That comment period, which expired on April 30, 2007, is being extended until August 31, 2007, in order to provide opportunity for more public notification and input into the rule development process.

The Agency is considering amendments to its rules (including, but not limited to, Minnesota Rules 7050.0185) governing the nondegradation of waters to reflect changes that have occurred since the existing rules were adopted and to address the effect of stormwater discharges. The Agency is also considering state consistency with federal anti-degradation policies as identified by the United States Environmental Protection Agency. The Agency is initiating this rulemaking by seeking comment from parties who have information or an interest in Minnesota's waters.

Persons Affected. The planned amendments to the rules will affect the owners and operators of all facilities that discharge to Minnesota waters and the citizens of Minnesota who will be affected by those discharges.

Statutory Authority. Minnesota Statutes § 115.03, subd. 1(e) authorizes the Agency to "adopt..., rules, ...under such conditions as it may prescribe, in order to prevent, control or abate water pollution, or for the installation or operation of disposal systems or parts thereof, or for other equipment and facilities."

Public Comment. Interested persons or groups may submit comments or information on these planned rule amendments until 4:30 p.m. on August 31, 2007. If you submitted comments in response to the previous notice, it is not necessary to resubmit comments or to re-notify the Agency of your interest in this rulemaking. The Agency will consider all comments in the development of the rule amendments. At this time the Agency has not determined whether it will appoint an advisory committee for this rulemaking but it is the Agency's intent to work extensively with the public and affected entities in developing the amendments. If you have comments regarding how the Agency should address nondegradation of the state's waters, or wish to be considered to serve on an advisory committee, please contact Carol Nankivel at the number or address below.

Rules Drafts. The Agency has not yet prepared a draft of the planned rule amendments, although interested parties may request to be notified when a draft is available by contacting Carol Nankivel at the number or address below.

Agency Contact Person. Written or oral comments, questions or requests to receive a draft of the rules when it has been prepared, and requests for more information on these planned rule amendments should be directed to:

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Brad Moore, Commissioner
Minnesota Pollution Control Agency

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